

EPA Region 5 Records Ctr.



386154

Screening Site Inspection  
Final Report  
for  
Perma-Treat of Illinois, Inc.  
ILD 063 698 971

October 24, 1996

Prepared for  
U.S. Environmental Protection Agency  
Contract 68-W8-0064  
Work Assignment 29-5JZZ

-6354-  
Wlan  
C.

DEC 04 1996

SE-5J

Mr. Richard Fedeli  
923 Fairview Avenue  
Rockford, Illinois 61101

ILD 053 191547

Re: Smith Oil (AKA Premium Oil Site)

Dear Mr. Fedeli:

On November 11, 1996, our contractor performed an inspection at your facility the Smith Oil Site. Enclosed please find the Screening Site Inspection Report from that inspection. The purpose of the assessment process was to determine whether hazardous substances were released to the environment, and to determine if specific targets have been impacted.

The report was reviewed by the United States Environmental Protection Agency (USEPA) and the Illinois Environmental Protection Agency (IEPA), and is being forwarded to you as a courtesy. The enclosed report includes a site description, a summary of analytical data for field samples, topographic information, site specific maps, and photographs. The USEPA has in its files the raw analytical data for the field samples which can be made available to you upon submittal of a Freedom of Information Request to FOIA Officer, at the above address, if you wish to perform an independent review of the data.

This completes the assessment phase of our investigation. The results of the inspection indicate that further work is required. Because of the USEPA's site disposition decision you may want to further assess and clean up the site. A voluntary clean-up plan can be developed with the assistance of environmental consultants and the IEPA. The IEPA contact can assist you in developing the plan to ensure that the assessment and clean-up strategies address Federal, State and local regulations. Working closely with the IEPA voluntary program staff could significantly reduce the potential for later Federal government involvement. The contact at the IEPA, is Robert O'Hara, IEPA, 2200 Churchill Road, Springfield, Illinois 62794-9276.

FJR  
ERB-RS3  
12-4-96

J6, 12/3/96

If you have any comments, please forward them to me in writing at the address on the letterhead or call Jeanne Griffin, of my staff, at (312) 886-3007.

Thank you for your cooperation.

Sincerely yours,

Frank Rollins, Chief  
Response Section #3

Enclosures

NOV 20 1996

SE-5J

Mr. Rudy J. Bond  
P.O. Box 99  
Marion, Illinois 62959

Re: Perma-Treat of Illinois, Inc.

Dear Mr. Bond:

On March 23, 1994, our contractor performed an inspection at your facility the Perma-Treat of Illinois. Enclosed please find the Screening Site Inspection Report from that inspection. The purpose of the assessment process was to determine whether hazardous substances were released to the environment, and to determine if specific targets have been impacted.

The report was reviewed by the United States Environmental Protection Agency (USEPA) and the Illinois Environmental Protection Agency (IEPA), and is being forwarded to you as a courtesy. The enclosed report includes a site description, a summary of analytical data for field samples, topographic information, site specific maps, and photographs. The USEPA has in its files the raw analytical data for the field samples which can be made available to you upon submittal of a Freedom of Information Request to FOIA Officer, at the above address, if you wish to perform an independent review of the data.

This completes the assessment phase of our investigation. The results of the inspection indicate that further work is required. Because of the USEPA's site disposition decision you may want to further assess and clean up the site. A voluntary clean-up plan can be developed with the assistance of environmental consultants and the IEPA. The IEPA contact can assist you in developing the plan to ensure that the assessment and clean-up strategies address Federal, State and local regulations. Working closely with the IEPA voluntary program staff could significantly reduce the potential for later Federal government involvement. The contact at the IEPA, is Robert O'Hara, IEPA, 2200 Churchill Road, Springfield, Illinois 62794-9276.

ESR(253)  
11/18/96



If you have any comments, please forward them to me in writing at the address on the letterhead or call Jeanne Griffin, of my staff, at (312) 886-3007.

Thank you for your cooperation.

Sincerely yours,

Frank Rollins, Chief  
Response Section #3

Enclosures

If you have any comments, please forward them to me in writing at the address on the letterhead or call Jeanne Griffin, of my staff, at (312) 886-3007.

Thank you for your cooperation.

Sincerely yours,

Frank Rollins, Chief  
Response Section #3

Enclosures

## Contents

1.0	Introduction .....	1-1
2.0	Site Background .....	2-1
2.1	Introduction .....	2-1
2.2	Site Description .....	2-3
2.3	Site History .....	2-3
2.3.1	Operational History .....	2-3
2.3.2	Summary of Onsite Environmental Work .....	2-3
2.4	Applicability of Other Statutes .....	2-5
3.0	Site Inspection Activities and Analytical Results .....	3-1
3.1	Introduction .....	3-1
3.2	Site Reconnaissance .....	3-1
3.3	Site Representative Interview .....	3-1
3.4	Groundwater Sampling .....	3-1
3.5	Surface Water Sampling .....	3-6
3.6	Soil Sampling .....	3-6
3.7	Air Sampling .....	3-7
3.8	Analytical Results .....	3-7
3.9	Key Samples .....	3-7
4.0	Characterization of Sources .....	4-1
4.1	Introduction .....	4-1
4.2	Contaminated Soil .....	4-1
4.2.1	Description .....	4-1
4.2.2	Waste Characteristics .....	4-1
4.2.3	Potentially Affected Migration Pathways .....	4-1
4.3	Other Potential Sources Within One Mile .....	4-2
5.0	Discussion of Migration Pathways .....	5-1
5.1	Introduction .....	5-1
5.2	Groundwater .....	5-1
5.3	Surface Water .....	5-2

## Contents (Continued)

5.4	Soil .....	5-3
5.5	Air .....	5-3
6.0	References .....	6-1

## Tables

Table 3-1	Sample Descriptions .....	3-4
Table 3-2	Key Sample Summary .....	3-8
Table 5-1	Private Well Users .....	5-2

## Figures

Figure 2-1	Location Map .....	2-2
Figure 2-2	Site Sketch .....	2-4
Figure 3-1	Onsite Sample Locations .....	3-2
Figure 3-2	Offsite Sample Locations .....	3-3

## Appendices

Appendix A	Site 4-Mile Radius Map and 15-Mile Surface Water Route Map
Appendix B	USEPA Form 2070-13
Appendix C	Target Compound List and Target Analyte List
Appendix D	Analytical Results
Appendix E	Site Photographs
Appendix F	Representative Well Logs



## 1.0 Introduction

On August 7, 1991, the Alternative Remedial Contracting Strategy (ARCS) V contractor was authorized by the U.S. Environmental Protection Agency (USEPA) Region V, to conduct a screening site inspection (SSI) of Perma-Treat of Illinois, Inc. (Perma-Treat), in Williamson County, Illinois.

The site was initially placed on the Comprehensive Environmental Response, Compensation, and Liability Act Information System on August 28, 1990, as a result of a request for discovery action initiated by the Illinois Environmental Protection Agency (IEPA).

The facility received its initial Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) evaluation in the form of a preliminary assessment (PA) report completed by the IEPA, on June 28, 1991. The sampling portion of the SSI was conducted on March 23, 1994, when a field team collected seven sediment samples and eight soil samples.

The purposes of the SSI have been stated by USEPA in a directive outlining pre-remedial program strategies. The directive states:

All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS (Hazard Ranking System) score, 2) to establish priorities among sites most likely to qualify for the NPL (National Priorities List), and 3) to identify the most critical data requirements for the listing [expanded] SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP (no further remedial action planned) or carried forward as an NPL listing candidate. A listing [expanded] SI will not automatically be done on these sites. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA (Resource Conservation and Recovery Act).... Sites that are designated as NFRAP or deferred to other statutes are not candidates for a listing [expanded] SI.

The listing [expanded] SI will address all data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to a higher authority will receive a listing [expanded] SI (USEPA, 1988).

USEPA Region V requested the ARCS V contractor to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

## **2.0 Site Background**

### **2.1 Introduction**

Perma-Treat is at North Carbon Street and Industrial Park Drive in Marion, Illinois. The site is in the northeastern quarter of the southeastern quarter of Section 14, Township 9 South, Range 2 East, in Williamson County. Figure 2-1 presents the site location map.

Perma-Treat manufactures and preserves landscape and dimensioned lumber products using chromated copper arsenate (CCA) in the treatment process. Lumber products are sold onsite and to retail stores for resale at other locations.

Perma-Treat cuts raw lumber to specified sizes. Cut lumber is dried in a kiln and temporarily stored onsite until it can be preserved with CCA.

Virgin product (50 percent CCA solution) is stored onsite in a 7,000 gallon tank. The solution is diluted to 1.2 percent CCA in two mixing tanks (one 10,000 gallon and one 16,000 gallon tank) and is further diluted to an unspecified concentration in an 11,000 gallon effluent tank. The diluted CCA solution is then pumped to an 18,000 gallon working tank. The working tank supplies CCA solution directly to a pressure cylinder as needed to treat lumber.

The pressure cylinder is about 8 feet in diameter and 54 feet long. It has a volume of about 20,000 gallons. In a single operation of the pressure cylinder, 6,000 to 7,000 board feet of lumber are impregnated with CCA at a pressure of 165 pounds per square inch. Perma-Treat uses the pressure cylinder up to eight times a day.

CCA treated lumber is removed from the pressure cylinder to an adjacent drip pad and allowed to dry for 24 to 48 hours. The drip pad is a concrete pad, about 35 feet by 130 feet in size. The pad is covered by a permanent roof mounted on poles. The pad surface slopes to a sump located beneath the pressure cylinder. CCA solution from the treated lumber is collected in the sump along with CCA released when the cylinder door is opened. The sump contents are pumped into the effluent tank and used in the next treatment.

After drying on the drip pad, treated lumber is most often stored in the unpaved storage yard on the western side of the site. During periods of back logged stock, treated lumber is stored wherever there is space (IEPA 1991a).

## **2.2 Site Description**

The Perma-Treat facility consists of an office building, machine shop, treatment building, drip pad, retail sales and storage buildings, and storage yard. Figure 2-2 presents a site sketch.

The 15 acre site is in a mixed use commercial/residential area. The site is bordered to the north by offices in the Marion Industrial Park, a Frito-Lay warehouse, and Todd uniform cleaning service; to the east by a United States Department of Agriculture building, housing the local Soil Conservation Service office, a vacant lot, and Century Lubricant Specialists; to the south by the Crab Orchard and Egyptian Railroad, south of the tracks is a Central Illinois Public Service facility; and to the west by residential homes and an apartment complex.

## **2.3 Site History**

### **2.3.1 Operational History**

The western 10 acres of the existing site were previously owned by the city of Marion. Rudy J. Bond, owner of Perma-Treat, purchased the city property in 1982. Land use by the city of Marion before 1982 is unknown. Perma-Treat began operations at the site in 1982.

### **2.3.2 Summary of Onsite Environmental Work**

Perma-Treat filed a "Notification of Hazardous Waste Activity," USEPA Form 8700-12, on April 12, 1984 (IEPA 1991a). This filing marks the earliest knowledge of the use of hazardous materials at the Perma-Treat site. Section IX of the form indicates Perma-Treat generates a non-listed characteristically toxic (D000) waste.

A release of CCA to a marshy area on the western side of the site occurred in 1985. The area was neutralized with lime, and the affected soil was drummed (IEPA 1991a).

Following a 1986 IEPA Resource Conservation and Recovery Act (RCRA) inspection, Perma-Treat was cited for fugitive dust emissions. Perma-Treat explained that dust originated from onsite truck traffic during dry periods in the summer. No follow-up action was conducted.

On March 25, 1988, Perma-Treat reported to the IEPA that on the previous day, about 125 gallons of nine percent CCA solution had leaked from the pressure cylinder when the door was not properly sealed (IEPA 1991a). About 25 gallons of the solution was released to the soil adjacent to the western side of the drip pad.



An estimated 675 square feet of soil was affected by the release. Thunderstorms occurred that same night.

On March 26, 1988, IEPA personnel noted a green discoloration in the affected soil. IEPA personnel traced the green discoloration approximately 2.5 miles downstream from Perma-Treat to the Route 37 bridge over Crab Orchard Creek. Citing the increased stream flow caused by the thunderstorm and the solubility of CCA in water, IEPA personnel concluded no emergency or remedial action was necessary (IEPA 1988).

Perma-Treat planned to neutralize the affected soil with cement, then remove and dispose of the affected soil. IEPA personnel advised Perma-Treat not to use cement in the ditch as it would cause the metals to precipitate out of solution, increasing the risk of sediment contamination (IEPA 1988).

In a June 20, 1991, RCRA inspection, IEPA personnel found restricted waste stored in an onsite waste pile for more than 90 days (IEPA 1991b).

The IEPA completed a preliminary assessment of Perma-Treat on July 7, 1991 (IEPA 1991a).

On September 19, 1991, the IEPA notified Perma-Treat that the waste pile was in violation of RCRA requirements for generators and storage sites of hazardous waste (IEPA 1991c).

Subject to numerous conditions and modifications, the IEPA approved Perma-Treat's RCRA closure plan for the waste pile on December 11, 1992 (IEPA 1992). The approved closure plan required soil sampling near the southern and eastern sides of the drip pad.

Perma-Treat appealed the IEPA enforcement action seeking closure of the waste pile (IEPA 1993). Perma-Treat won the appeal, halting IEPA's RCRA enforcement action (IEPA 1994).

## **2.4 Applicability of Other Statutes**

Perma-Treat is a RCRA listed full-quantity generator (USEPA 1994).

## **3.0 Site Inspection Activities and Analytical Results**

### **3.1 Introduction**

This section outlines procedures used and observations made during the Perma-Treat SSI. Sampling activities were conducted in accordance with the Quality Assurance Project Plan (QAPjP), dated September 27, 1991. Figures 3-1 and 3-2 show onsite and offsite sample locations, respectively. Table 3-1 provides a summary of sample descriptions and locations.

Appendix B presents the USEPA Potential Hazardous Waste Site Inspection Report (Form 2070-13).

Samples collected for this SSI were analyzed for organic and inorganic substances contained on the USEPA target compound list (TCL) and target analyte list (TAL) by USEPA contract laboratory program participant laboratories. Appendix C presents the TCL and TAL. Appendix D presents a summary of all analytical data generated by SSI sampling. Appendix E contains photographs of the site and sample locations.

### **3.2 Site Reconnaissance**

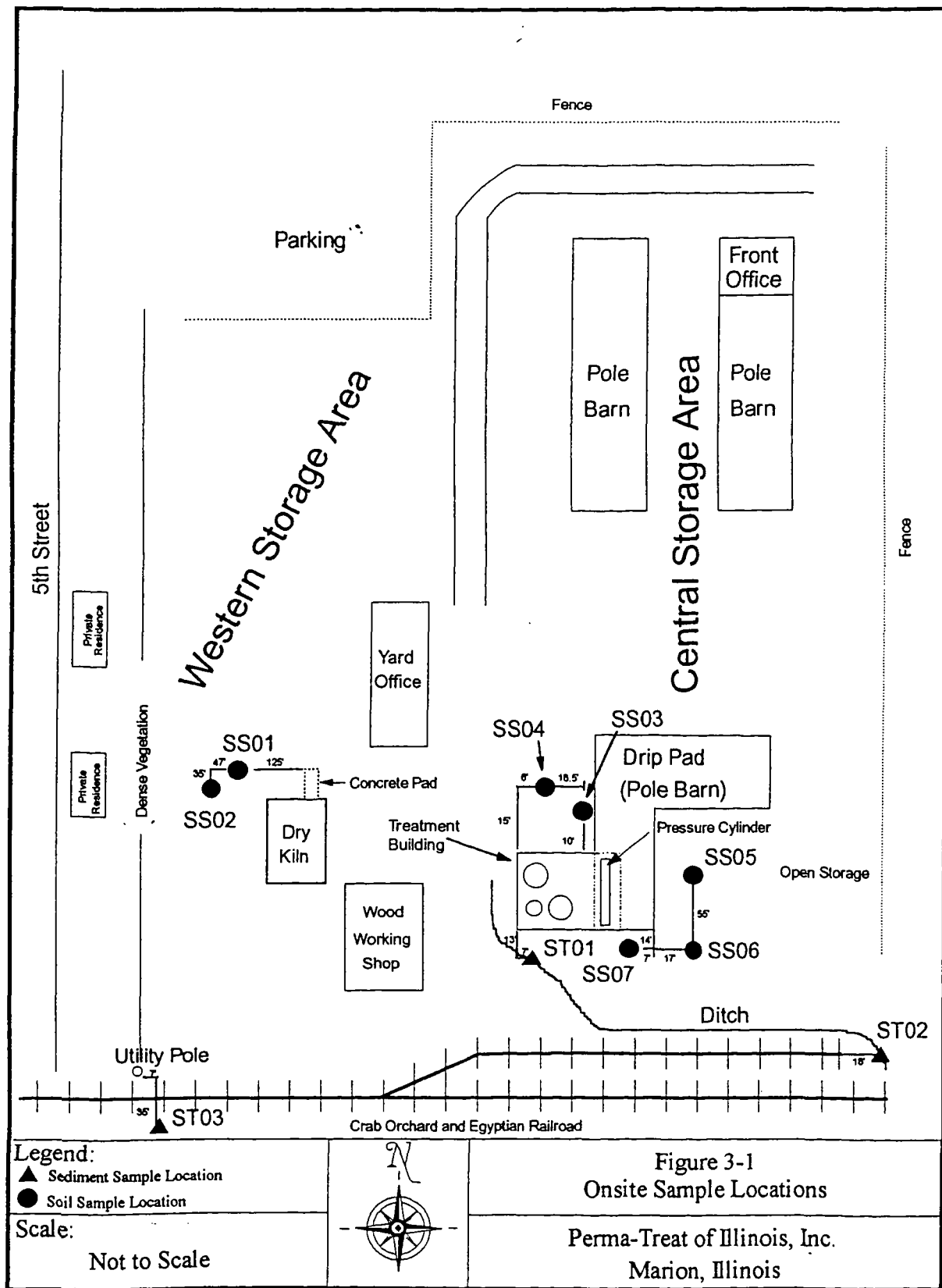
On July 27, 1993, a reconnaissance of the Perma-Treat site was conducted. This visit included a site representative interview and a visual site inspection to determine the status, facility activities, potential health or safety hazards, and to identify potential sampling locations.

### **3.3 Site Representative Interview**

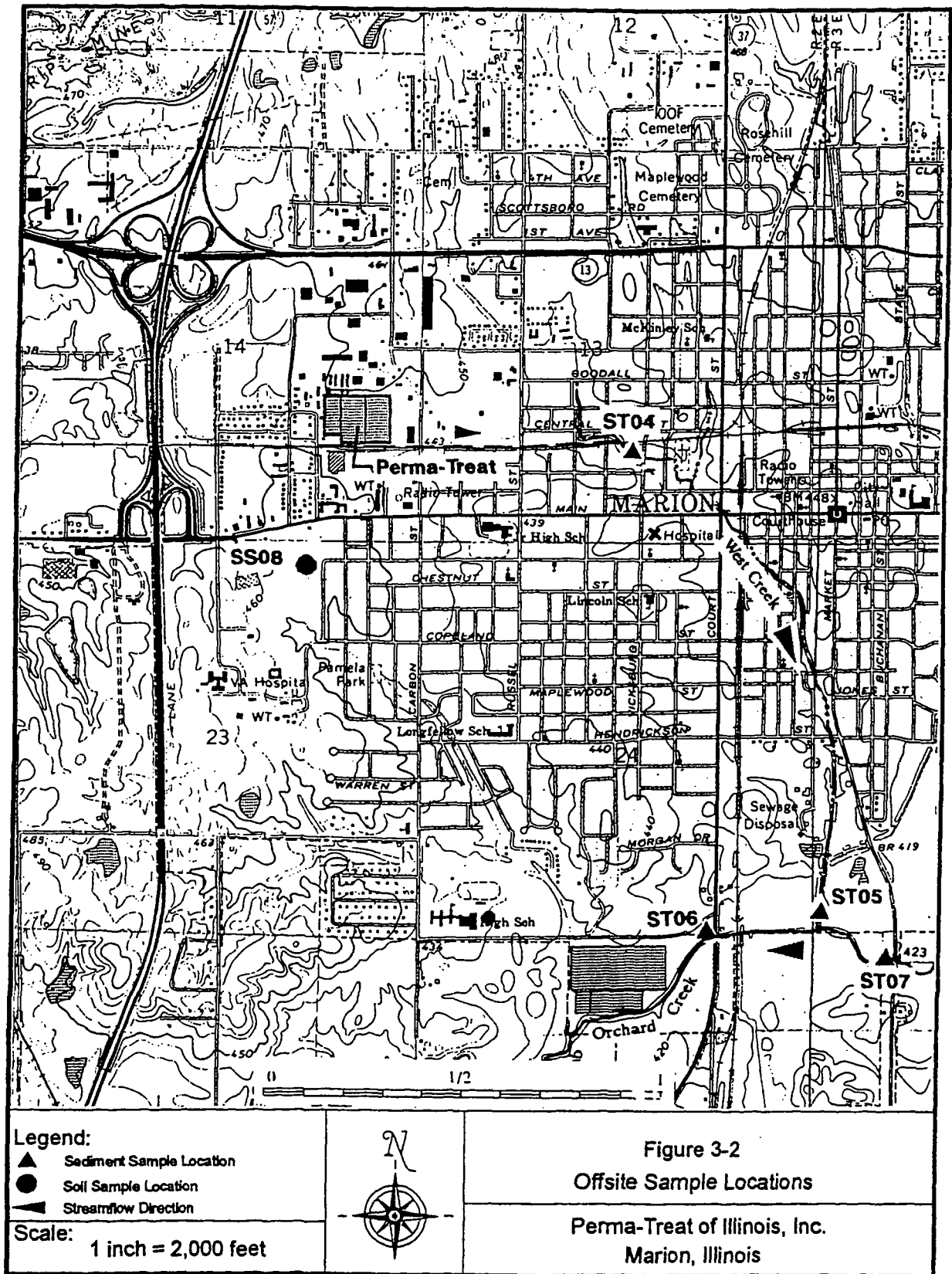
Mr. Rudy J. Bond and Mrs. C.J. Bond were interviewed by the reconnaissance team on July 27, 1993. The reconnaissance team discussed the purpose of the SSI with the Bonds and gathered site-specific information.

### **3.4 Groundwater Sampling**

No groundwater samples were collected during the sampling trip. The nearest private well is about a tenth of a mile west of the site [Illinois State Water Survey (ISWS) 1993]. However, the nearest private drinking water well is believed to be more than 1 mile from Perma-Treat (IEPA 1991a). Most area residents are supplied



FRE00117.PRE 9-25-94



FRE00118.PRE 7-13-94



Table 3-1  
Sample Descriptions

Sample Location Number	Depth	Appearance	Location
ST01	0 - 3 Inches	Sand, brown, with some clay, moist.	Collected 13.5 feet south and 7 feet east of the southwestern corner of the pressure treatment building.
ST02	0 - 3 Inches	Clayey silt, light brown grading to black, silty clay, moist.	Collected 18 feet east of the center of the eastern end of the Perma-Treat railroad siding.
ST03	0 - 3 Inches	Clayey sand, light brown, moist.	Collected 35 feet south and 7 feet east of a utility pole near the southwestern corner of the site.
ST04	0 - 3 Inches	Sand, brown, some black material (charcoal), trace clay.	Collected from an unnamed tributary to West Creek, about 10 feet west of the southwestern corner of the Vicksburg Street bridge.
ST05	0 - 3 Inches	Silty clay, brown, wet.	Collected from the eastern bank of West Creek, about 56 feet north of Crab Orchard Creek.
ST06	0 - 3 Inches	Silty clay, dark brown with organic matter, wet.	Collected from the northern bank of Crab Orchard Creek, about 10 feet west of the Route 37 bridge.
ST07	0 - 6 Inches	Silty clay, brown with some gravel.	Collected from sediment on the southern side of Crab Orchard Creek, about 36 feet west of the Market Street bridge.

Table 3-1 (Continued) Sample Descriptions			
Sample Location Number	Depth	Appearance	Location
SS01	0 - 3 Inches	Silty clay, brown, moist.	Collected 125 feet west of the northwestern corner of the concrete pad north of the dry kiln.
SS02	0 - 3 Inches	Silty clay, brown, with some organic matter.	Collected 47 feet west and 35 feet south of sample location SS01.
SS03	0 - 2 Inches	Silty clay, reddish-brown grading brownish-gray, some gravel.	Collected 10 feet north and 24.5 feet east of the northwestern corner of the pressure treatment control room building.
SS04	0 - 3 Inches	Silty clay, brown, some gravel.	Collected 15 feet north and 6 feet east of the northwestern corner of the pressure treatment control room building.
SS05	0 - 3 Inches	Silty clay, brown, moist.	Collected 41 feet north and 17 feet east of the southeastern corner of the drip pad/pole barn.
SS06	0 - 3 Inches	Silty clay, brown, some charcoal, moist.	Collected 14 feet south and 17 feet east of the southeastern corner of the drip pad/pole barn.
SS07	0 - 3 Inches	Sandy clay, brown, dry.	Collected 14 feet south and 7 feet west of the southeastern corner of the drip pad/pole barn.
SS08	0 - 6 Inches	Sandy clay, dark brown.	Collected in Pamela Park, about 33 feet from the west end of Cherry Street.

with municipal drinking water from Lake Marion; a surface water reservoir located about 2.5 miles south of town.

### **3.5 Surface Water Sampling**

No surface water samples were collected. On March 23, 1994, a field team collected seven sediment (ST) samples with clean, stainless steel spoons. Samples were placed in clean sample jars. Sediment samples were not split with Perma-Treat. Figure 3-1 and Figure 3-2 show onsite and offsite sample locations, respectively. Table 3-1 provides a summary of sample descriptions and locations.

Sediment samples were scheduled for TCL and TAL analysis under a routine analytical services request. Sediment samples scheduled for organic analysis were shipped to Southwest Labs of Oklahoma in Broken Arrow, Oklahoma, on March 24, 1994. Sediment samples scheduled for inorganic analysis were shipped to IT Analytical Services - Export in Export, Pennsylvania, on March 24, 1994.

All reusable sampling and personal protective equipment (PPE) were decontaminated before transport offsite. Disposable sampling and PPE items were discarded in accordance with procedures outlined in the SSI project work plan and QAPjP.

Sample locations ST01 through ST03 are on or adjacent to the site, in the overland flow pathway. Sample locations ST04 through ST06 are downstream from the site. Location ST06 is at the furthest downstream point at which the green discoloration of CCA was observed during a March 1988 RCRA inspection. A sediment background sample was collected at location ST07 in Crab Orchard Creek, upstream of the creek's confluence with West Creek.

### **3.6 Soil Sampling**

On March 23, 1994, a field team collected eight soil (SS) samples with clean, stainless steel spoons. Samples were placed in clean sample jars. Perma-Treat accepted splits of soil samples from locations SS01 through SS08. Figure 3-1 and Figure 3-2 show onsite and offsite sample locations, respectively. Table 3-1 provides a summary of sample descriptions and locations.

Samples were scheduled for TCL and TAL analysis under a routine analytical services request. Soil samples scheduled for organic analysis were shipped to Encotec in Ann Arbor, Michigan, on March 24, 1994. Soil samples scheduled for inorganic

analysis were shipped to Weyerhaeuser Analytical & Testing Services in Federal Way, Washington, on March 24, 1994.

All reusable sampling and PPE were decontaminated before transport offsite. Disposable sampling and PPE items were discarded in accordance with procedures outlined in the SSI project work plan and QAPjP.

Sample locations SS01 through SS07 are in suspected onsite source areas. Sample locations SS01 and SS02 are in an area allegedly exposed to a 1985 CCA release. Sample locations SS03 and SS04 are in an area near the drip pad. This area was exposed to a 1988 CCA release. Sample locations SS05, SS06, and SS07 are south and east of the drip pad. Samples from these three locations will document the soil condition between the drip pad and the site surface water runoff pathway.

A background soil sample was collected at location SS08, about a half mile south of the site in Pamela Park. This location appears to be representative of natural soil conditions in the area.

### **3.7 Air Sampling**

No air samples were collected during the sampling trip. Past releases of CCA to onsite soil occurred in areas not generally exposed to vehicular traffic. The potential is minimal for migration of soil bound hazardous substances in dust emissions generated by vehicular traffic.

### **3.8 Analytical Results**

This section summarizes analytical results from SSI samples. Appendix D presents all SSI analytical data. Semivolatile organic compounds, pesticides, and inorganic compounds were documented in sediment and soil samples.

Analytical data from the analysis of sediment samples document the release of five pesticides and eight inorganic substances. Analytical data from the analysis of soil samples document the release of one semivolatile organic compound and eleven inorganic compounds.

### **3.9 Key Samples**

"Key samples" are those samples that contain substances in sufficient concentration to document an observed release. Table 3-2 identifies SSI key samples.



Table 3-2  
Key Sample Summary

Sediment								
Substance		Sample Location Number						
Analytical Fraction	Compound/ Analyte	ST01	ST02	ST03	ST04	ST05	ST06	ST07 Background
Pesticide ( $\mu\text{g/kg}$ )	Heptachlor Epoxide	-	-	-	-	5.0 P	-	3.1 U
	Dieldrin	-	-	16 P	-	13 P	6.2 P	6.0 U
	Endosulfan II	-	-	-	-	11 P	10 P	6.0 U
	Alpha-Chlordane	-	-	39 JPD	-	39 P	19 P	4.7 P
	Gamma-Chlordane	-	-	37 P	-	35 P	20 P	5.0 P
Inorganic ( $\text{mg/kg}$ )	Arsenic	163 *	179 *	23 *	-	-	-	7.3 *
	Cadmium	-	-	-	-	1.7 B	-	1.4 U
	Calcium	93,200	68,800	-	-	13,800	12,100	3,130
	Chromium	114	130	-	-	-	-	11.7
	Copper	95.9	114	-	-	-	-	29
	Lead	-	-	-	-	174 *	-	39.3 *
	Magnesium	8,180	6,150	-	-	-	-	1,650
	Selenium	-	-	0.99 B	-	-	-	0.60 U

Table 3-2 (Continued)  
Key Sample Summary

Soil									
Substance		Sample Location Number							
Analytical Fraction	Compound /Analyte	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08 Background
Semivolatile ( $\mu\text{g/kg}$ )	Bis(2-Ethylhexyl) Phthalate	-	-	2,000 B	-	-	-	-	420 UJB
Inorganic (mg/kg)	Aluminum	17,200	16,800	-	-	-	-	-	5,450
	Antimony	-	-	18.9 JN	-	-	-	-	5 UJN
	Arsenic	-	-	5,490	-	-	-	636 J*	11.5 JN
	Barium	403	-	-	-	-	-	-	74.9
	Calcium	-	-	102,000	167,000	-	-	-	24,700
	Chromium	-	-	2,640	159	1,700	157	266	14.2
	Copper	-	45.1 JN	2,510 JN	132 JN	1,430 JN	151 JN	427 JN	8.2 JN
	Lead	-	-	-	-	114	-	-	22.5
	Magnesium	-	-	-	11,500	-	-	-	3,170
	Potassium	1,570	1,610	1,490	1,570	1,100	834	1,240	356
	Thallium	0.27 B	0.30 B	-	-	0.25 B	0.19 B	0.18 B	0.16 U

Table 3-2 (Continued)  
Key Sample Summary

$\mu\text{g/kg}$	Microgram per kilogram.
$\text{mg/kg}$	Milligram per kilogram.
J	Reported value is estimated.
U	Substance is undetected. The reported value is the contract required quantitation limit (CRQL).
B	Reported value less than the contract required detection limit (CRDL), but greater than the instrument detection limit.
P	Greater than twenty-five percent difference for detected concentrations.
D	Analyzed at a secondary dilution factor.
N	Spiked sample recovery not within control limits.
*	Duplicate analysis not within control limits.

## **4.0 Characterization of Sources**

### **4.1 Introduction**

Data from the analysis of SSI samples identifies one source of hazardous substances at Perma-Treat: contaminated soil.

### **4.2 Contaminated Soil**

#### **4.2.1 Description**

Analysis of SSI soil samples from locations SS01 through SS08 document observed releases of several hazardous substances. Table 3-2 shows these hazardous substances. Observed releases are documented in three separate areas, at locations SS01 and SS02 in the western storage yard, SS03 and SS04 west of the drip pad, and SS05, SS06, and SS07 south and east of the drip pad. The lateral extent of substances identified in each area is not known. All seven onsite soil samples are in the southern half of the 15 acre site. The size of the contaminated soil source area is estimated to be 3 acres.

#### **4.2.2 Waste Characteristics**

Data from analysis of the SSI soil samples document an observed release of one semivolatile compound and eleven inorganic analytes. Table 3-2 shows these substances. Chromium, copper, potassium, and thallium are documented in at least five of the seven onsite soil sample locations. The remaining substances appear at one or two of the soil sample locations. The lone semivolatile compound, bis(2-ethylhexyl)phthalate, is present at a concentration of 2,000 micrograms per kilogram. Inorganic analyte concentrations range from 0.18 to 167,000 milligrams per kilogram.

#### **4.2.3 Potentially Affected Migration Pathways**

The soil pathway contains observed releases of TCL and TAL hazardous substances.

Observed releases of TCL and TAL substances are documented in the surface water pathway. Notably, onsite sediment sample locations ST01 and ST02 document observed releases of, among other inorganic analytes, arsenic, chromium, and copper. Observed releases of pesticides are documented only in offsite sediment locations.

Hazardous substances documented in onsite soil may leach downward into the groundwater.

A potential exists for entrainment of contaminated soil in the air pathway as airborne particulate matter.

#### **4.3 Other Potential Sources Within One Mile**

Potential sources within one mile of Perma-Treat include five CERCLA sites; however, all five sites are designated as site evaluation accomplished (USEPA 1993). These sites are Downstate Construction Co. Inc. (ILD 980 899 173) at 1810 Dorothy Lane, Illinois Coal Oil & Gas Co. (ILD 980 899 025) at 909 S. Russel, Jet Fuel Co. (ILD 980 899 041) at 903 N. Bently Street, Oxford Construction (ILD 980 899 058) at 200 W. Jefferson, all in the city of Marion, and Morris Coal Co. #5 (ILD 980 089 090) in sections 10 and 11, Township 9 South, Range 3 East, Williamson County, Illinois.

## **5.0 Discussion of Migration Pathways**

### **5.1 Introduction**

This section includes information useful in analyzing the potential impact of contaminants found at the Illiana Disposal site on the four migration pathways: groundwater, surface water, air, and soil.

### **5.2 Groundwater**

The site area in northern Vermilion County is underlain by a thick sequence of glacial drift. Drift deposits in this area range from about 250 feet to more than 400 feet in thickness (Selkregg and Kempton 1958, Piskin and Bergstrom 1975). Wells within 4 miles of the site penetrate two water bearing intervals in the glacial drift. These water bearing intervals are informally identified here as the upper drift and lower drift aquifers. No wells are screened in bedrock within 4 miles of the site [Illinois State Water Survey (ISWS) 1994].

Well construction reports (well logs) for nine wells in the 4 mile target area are used to define local geologic conditions. Appendix F presents these well logs.

In general, area wells penetrate three significant zones in the glacial drift. The upper zone is predominantly soil, sand, and gravel. The thickness of this zone is highly variable, ranging from 1 foot to more than 75 feet. The average zone thickness is 26 feet. This zone is saturated in many places and is informally identified as the upper drift aquifer.

The second significant zone is a laterally continuous clay. Predominantly gray, the upper part of the clay is yellow in many places. In area wells, the thickness of the clay ranges from 20 feet to 194 feet, and averages 68 feet.

Below the clay, drift wells are screened in sand and gravel. Sand and gravel deposits below the clay are informally identified as the lower drift aquifer. No nearby wells are known to fully penetrate this aquifer, and its thickness is not known. It is assumed to continue downward to bedrock.

Groundwater is used as a drinking water source within 4 miles of the site. The nearest private well is about 800 feet northeast of the site; however, this well is owned by the adjacent Illinois Landfill, Inc. Two landfill cells operated by Illinois Landfill, Inc. are located between Illiana Disposal and this well.

The major source of drinking water appears to be the lower drift aquifer. The upper drift aquifer is used sparingly as a drinking water source within 4 miles of the site.

Table 5-1 shows the estimated population using private wells as a drinking water source within 4 miles of the site. This population is determined by multiplying the number of structures counted in rural areas by the average population per household in Vermilion County and Iroquois County. All city of Hoopeston residents are assumed to obtain drinking water from the municipal water system. Table 5-2 shows the public water supply sources within 4 miles of the site.

Table 5-1 Private Well Users	
Radial Distance From Illiana Disposal in Miles	Approximate Population Served By Private Wells
0.00 - 0.25	5
0.25 - 0.50	5
0.50 - 1.00	12
1.00 - 2.00	260
2.00 - 3.00	195
3.00 - 4.00	226
Total Population:	703

Source: United States Geological Survey 1964a, 1964b, U.S. Department of Commerce 1990.

Table 5-2 Public Water Supply Sources Within Four Miles of Illiana Disposal				
Distance/ Direction From Site	Source Name	Location of Source	Approximate Population Served	Source Type
2.3 miles northwest	Hoopeston well #4	Section 11, T. 23 N., R. 12 W.	0 (standby well)	Lower drift aquifer
2.3 miles northwest	Hoopeston well #5	Section 11, T. 23 N., R. 12 W.	2592	Lower drift aquifer
2.3 miles northwest	Hoopeston well #6	Section 11, T. 23 N., R. 12 W.	3534	Lower drift aquifer

Source: IEPA 1989

### 5.3 Surface Water

Site surface water runoff drains into the slough located on the eastern side of the site. The slough flows north into a ditch and then west along the north border of the site. The ditch follows the access road offsite to another ditch that flows one-half mile west to the North Fork Vermilion River.

Surface sediment samples were taken from the slough and the ditches to evaluate potential releases to the surface water pathway. The background sample was collected upstream of the North Fork Vermilion River just east of the bridge.

### 5.4 Soil

Five soil samples were collected at the Illiana Disposal site. Chemical analysis of these soil samples indicates pesticides (aldrin, endrin ketone, and alpha chlordane) and inorganics (calcium, magnesium, and mercury) at concentrations significantly above background levels. Site soil samples SS01 through SS05 were used to



determine the source area and volume. The area outlined by these samples represents the total site area (11 acres).

#### **5.4 Air**

No documented air releases are known and none was observed during the SSI; however, the presence of chemicals at or near the ground surface creates the potential for windblown particulates to carry chemicals to neighboring residences.

An estimated 6,829 people live within four miles of the site. No residences, schools, or daycare centers are within 200 feet of the site property. Sensitive environments within four miles of the site include wetlands and the North Fork Vermilion River.

## 6.0 References

- Andrews Environmental Engineering, Inc., 1993. In personal communication to ARCS V contractor, Contract 68-W8-0064, Work Assignment 29-5JZZ, November 2.
- IEPA 1989. Well Site Survey Report, Hoopeston, Facility Number 1830450, Division of Public Water Supplies, May.
- Illinois State Water Survey, 1994. Private and Public, Industrial, and Commercial Well databases, February.
- Piskin, K., and R.E. Bergstrom, 1975. Glacial Drift in Illinois: Thickness and Character, Illinois State Geological Survey, Circular 490.
- Selkregg, L.F., and J.P. Kempton, 1958. Groundwater Geology in East-Central Illinois, Illinois State Geological Survey, Circular 248.
- U.S. Environmental Protection Agency, 1988, "Pre-Remedial Strategy for Implementing SARA," Office of Solid Waste and Emergency Response, Washington, D.C., Directive Number 9345.2-101, February.
- U.S. Department of Commerce, 1990. Census of Population and Housing; Summary Population and Housing Characteristics Illinois, Bureau of the Census, 1990 CPH-1-15.
- United States Geological Survey, 1964a. Topographic map, Ambia, Illinois-Indiana, 7.5 minute quadrangle.
- United States Geological Survey, 1964b. Topographic map, Hoopeston, Illinois-Indiana, 7.5 minute quadrangle.

- IEPA, 1991b. RCRA Land Disposal Restriction Inspection Report, Perma-Treat of Illinois, USEPA ID. No. ILD 063 698 971, IEPA No. 1990555010, June 20.
- IEPA, 1991c. Division of Land Pollution Control, in letter to Perma-Treat of Illinois, Inc., September 19.
- IEPA, 1988. Field Operations Section, Division of Land Pollution Control, in memorandum to IEPA Land Division File, March 25.
- Illinois State Geological Survey (ISGS), 1979. Quaternary Deposits of Illinois, geologic map, 1:500,000.
- ISGS, 1975. Handbook of Illinois Stratigraphy, Bulletin 95.
- ISGS, 1967. Geologic Map of Illinois, 1:500,000.
- Illinois State Water Survey (ISWS), 1993. Private and PICS (Public, Industrial, and Commercial) Well Databases, portions of Williamson County, Illinois.
- Pryor, W.A., 1956. Groundwater Geology in Southern Illinois, Illinois State Geological Survey, Circular 212, p. 24.
- U.S. Department of Commerce, 1990. Census of Populations and Housing, Illinois.
- U.S. Environmental Protection Agency (USEPA), 1994. List of Resource Conservation and Recovery Act notifiers in Illinois, March 10.
- USEPA, 1993. Illinois CERCLA Information System List-8: Site/Event Listing, October 4.
- USEPA, 1991. Quality Assurance Project Plan (QAPjP) for Region V Superfund Site Assessment Program, Contract No. 68-W8-0064, Work Assignment No. 29-5JZZ, September 27.

USEPA, 1988. Pre-Remedial Strategy for Implementing Superfund Amendments and Reauthorization Act, Office of Solid Waste and Emergency Response, Washington, D.C., Directive Number 9345.2-101, February 12.

United States Geological Survey (USGS), 1966a. Topographic map, Marion, Illinois, 7.5 minute quadrangle, photorevised 1990.

USGS, 1966b. Topographic map, Crab Orchard Lake, Illinois, 7.5 minute quadrangle, photorevised 1990.

USGS, 1963a. Topographic map, Herrin, Illinois, 7.5 minute quadrangle.

USGS, 1963b. Topographic map, Johnston City, Illinois, 7.5 minute quadrangle, photoinspected 1976.

## Appendix A

Perma-Treat of Illinois, Inc.

4 Mile Radius and 15 Mile Downstream Maps

# SDMS US EPA Region V

## *Imagery Insert Form*

**Some images in this document may be illegible or unavailable in SDMS.  
Please see reason(s) indicated below:**

☐

Illegible due to bad source documents. Image(s) in SDMS is equivalent to hard copy.

**Specify Type of Document(s) / Comment**

☐

**Confidential Business Information (CBI).**

This document contains highly sensitive information. Due to confidentiality, materials with such information are not available in SDMS. You may contact the EPA Superfund Records Manager if you wish to view this document.

**Specify Type of Document(s) / Comment**

☒

**Unscannable Material: Oversized   X   or      Format.**

Due to certain scanning equipment capability limitations, the document page(s) is not available in SDMS. The original document is available for viewing at the Superfund Records center.

**Specify Type of Document(s) / Comment**

☐

**Other:**

**Appendix B**

**Perma-Treat of Illinois, Inc.**

**USEPA Form 2070-13**



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION  
01 STATE 02 SITE NUMBER  
ILD 063 698 971

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)  
Perma-Treat of Illinois  
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER  
North Carbon St. & Industrial Park Dr.  
03 CITY  
Marion  
04 STATE 05 ZIP CODE 06 COUNTY 07 COUNTY CODE 08 CONG DIST  
IL 62959 Williamson 199 22  
09 COORDINATES  
LATITUDE LONGITUDE  
42 44 08" N 88 57 08" W  
10 TYPE OF OWNERSHIP (Check one)  
☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL  
☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 02 SITE STATUS 03 YEARS OF OPERATION  
03/23/94 ☒ ACTIVE ☐ INACTIVE 1982 present UNKNOWN  
MONTH DAY YEAR BEGINNING YEAR ENDING YEAR  
04 AGENCY PERFORMING INSPECTION (Check all that apply)  
☒ A. EPA ☐ B. EPA CONTRACTOR BVWS ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR  
☐ E. STATE ☐ F. STATE CONTRACTOR ☐ G. OTHER  
05 CHIEF INSPECTOR 06 TITLE 07 ORGANIZATION 08 TELEPHONE NO.  
John Chitwood Geologist BVWS 312 683-7832  
09 OTHER INSPECTORS 10 TITLE 11 ORGANIZATION 12 TELEPHONE NO.  
Jeff Albano Environmental Scientist BVWS 312 683-7853  
Mary Lee Geologist BVWS 312 346-3775  
( )  
( )  
( )  
13 SITE REPRESENTATIVES INTERVIEWED 14 TITLE 15 ADDRESS 16 TELEPHONE NO.  
Rudy J. Bond Owner N. Carbon & Industrial 618 997-5646  
Rodger A. Walker Site Consultant 802 E. Herrin St., 618 942-2844  
Herrin, IL  
( )  
( )  
( )  
( )  
17 ACCESS GAINED BY (Check one) 18 TIME OF INSPECTION 19 WEATHER CONDITIONS  
☒ PERMISSION ☐ WARRANT 0820 Partly cloudy, 40°F, forecasted rain

IV. INFORMATION AVAILABLE FROM

01 CONTACT 02 OF (Agency/Organization) 03 TELEPHONE NO.  
Tom Crause IEPA/DPLC/RPMS 217,782-6760  
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM 05 AGENCY 06 ORGANIZATION 07 TELEPHONE NO. 08 DATE  
Jeff Albano USEPA BVWS 312 683-7853 09/23/94  
MONTH DAY YEAR





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
ILD 063 698 971

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) <input checked="" type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER _____ (Specify)	02 WASTE QUANTITY AT SITE MEASURE OF WASTE QUANTITIES (Must be independent) TCNS _____ CUBIC YARDS <u>2,420</u> NO. OF DRUMS _____	03 WASTE CHARACTERISTICS (Check all that apply) <input type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> D. PERSISTENT <input checked="" type="checkbox"/> E. SOLUBLE <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IGNITABLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE
--	---	--

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	GILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	unknown		contaminated soil
OCC	OTHER ORGANIC CHEMICALS	unknown		Contaminated soil
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown		contaminated soil

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
PSD	Heptachlor epoxide	1024-57-3		5	PPB
PSD	Dieldrin	60-57-1		16	PPB
PSD	Endosulfan II	33213-65-9		11	PPB
PSD	Alpha Chlordane	5103-71-9		39	PPB
PSD	Gamma Chlordane	5103-74-2		37	PPB
OCC	bis(2-ethylhexyl) phthalate	117-81-7		2,000	PPB
MES	Aluminum	1344-28-1		17,200	PPM
MES	Antimony	7440-36-0		18.9	PPM
MES	Arsenic	7440-38-2		5,490	PPM
MES	Barium	7440-39-3		403	PPM
MES	Calcium			167,000	PPM
MES	Chromium	7440-47-3		2,640	PPM
MES	Copper	7440-50-8		2,510	PPM
MES	Lead	7439-92-1		174	PPM
MES	Magnesium			11,500	PPM

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

USEPA 1994 analytical case no. 21795



01 PHYSICAL STATES (CHECK ALL THAT APPLY)	02 WASTE QUANTITY AT SITE <small>MEASURES OF WASTE QUANTITIES MUST BE INDICATED!!</small>	03 WASTE CHARACTERISTICS (CHECK ALL THAT APPLY)
<input checked="" type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER _____ <small>(Specify)</small>	<input type="checkbox"/> E. SLURRY <input type="checkbox"/> F. LIQUID <input type="checkbox"/> G. GAS  TCNS _____  CUBIC YARDS <u>2,420</u>  NO. OF DRUMS _____	<input checked="" type="checkbox"/> H. SOLUBLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE  <input type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> D. PERSISTENT <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IGNITABLE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	Unknown		Contaminated soil
OCC	OTHER ORGANIC CHEMICALS	Unknown		Contaminated soil
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		Contaminated soil

[illegible]

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

USEPA 1994, analytical case no. 21795



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

ILD 063 698 971

I. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 4,853

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

No groundwater contamination documented or observed. Groundwater contamination potentially possible through migration.

01 ☒ B. SURFACE WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_

02 ☒ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☒ ALLEGED

A release of chromated copper arsenate (CCA) to the crab orchard creek was observed on 3-25-88.

01 ☒ C. CONTAMINATION OF AIR

03 POPULATION POTENTIALLY AFFECTED: 19,782

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

Potential for a release of contaminated dust exists. About 19,782 persons live within 4 miles of the site.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL

☐ ALLEGED

Not applicable.

01 ☒ E. DIRECT CONTACT

03 POPULATION POTENTIALLY AFFECTED: 19,782

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

Potential for direct contact with CCA contaminated soil. Site is unrestricted allowing access to source areas by the public.

01 ☒ F. CONTAMINATION OF SOIL

03 AREA POTENTIALLY AFFECTED: 3 acres

02 ☒ OBSERVED (DATE: 1988, 1991)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL

☒ ALLEGED

Visual contamination of soil was documented on 3-25-88 and on a site inspection on 6-20-91.

01 ☒ G. DRINKING WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 4,853

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

Within 4 miles of the site, an estimated population of 4,853 persons use groundwater for drinking water.

01 ☒ H. WORKER EXPOSURE/INJURY

03 WORKERS POTENTIALLY AFFECTED: 14

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

Perma-Treat employees are potentially exposed to contaminated soil and dust each working day.

01 ☒ I. POPULATION EXPOSURE/INJURY

03 POPULATION POTENTIALLY AFFECTED: 19,782

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL

☐ ALLEGED

Refer to "C" and "E" above.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

ILD 063 698 971

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

No damage to flora observed.

01 ☐ K. DAMAGE TO FAUNA

04 NARRATIVE DESCRIPTION (Include names of species)

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

No damage to fauna observed.

01 ☐ L. CONTAMINATION OF FOOD CHAIN

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

Contamination to food chain not documented.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES

(Leaking drums, leaking pipes, leaking drums)

03 POPULATION POTENTIALLY AFFECTED: 19,782

02 ☐ OBSERVED (DATE: 3-23-94)

☒ POTENTIAL

☒ ALLEGED

04 NARRATIVE DESCRIPTION

Source areas do not have any engineered containment systems.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

No damage to offsite property observed.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

No contamination of sewers, storm drains, WWTPs is observed or documented.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

No illegal/unauthorized dumping observed or documented.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 19,782

IV. COMMENTS

IEPA, 1991. CERCLA Preliminary Assessment report.

V. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION  
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
ILL 063 698 97

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input checked="" type="checkbox"/> I. OTHER HAZWST	form 8700-12	4-12-84		Notification of hazardous waste activity
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/ DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE (six)
<input checked="" type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	06 AREA OF SITE 15 (Acres)
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input checked="" type="checkbox"/> H. OTHER wood preservation (Specify)	
<input type="checkbox"/> I. OTHER (Specify)				

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE    ☐ B. MODERATE    ☒ C. INADEQUATE, POOR    ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF GRUMS, DIKING, LINERS, BARRIERS, ETC.

There is no engineered containment of source areas. All potential exposure is to the soil and sediment.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO  
02 COMMENTS

Perma-Treat has no fencing restricting access to source areas.

VI. SOURCES OF INFORMATION (Check specific references, e.g., State files, EPCRA analysis, reports)

IEPA 1991 CERCLA Preliminary Assessment Report



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
ILD 063 698 971

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A.  $10^{-8} - 10^{-6}$  cm/sec ☐ B.  $10^{-6} - 10^{-5}$  cm/sec ☒ C.  $10^{-5} - 10^{-3}$  cm/sec ☐ D. GREATER THAN  $10^{-3}$  cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE  
(Less than  $10^{-8}$  cm/sec)  
☐ B. RELATIVELY IMPERMEABLE  
( $10^{-8} - 10^{-6}$  cm/sec)  
☒ C. RELATIVELY PERMEABLE  
( $10^{-6} - 10^{-4}$  cm/sec)  
☐ D. VERY PERMEABLE  
(Greater than  $10^{-4}$  cm/sec)

03 DEPTH TO BEDROCK

45 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

0.5 (ft)

05 SOIL pH

---

06 NET PRECIPITATION

3 (in)

07 ONE YEAR 24 HOUR RAINFALL

3 (in)

08 SLOPE

SITE SLOPE

0-2 %

DIRECTION OF SITE SLOPE

South

TERRAIN AVERAGE SLOPE

%

09 FLOOD POTENTIAL

SITE IS IN 10-100 YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (3 mile minimum)

ESTUARINE

OTHER

A. (mi)

B. (mi)

12 DISTANCE TO CRITICAL HABITAT (or endangered species)

1.5 (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS; NATIONAL/STATE PARKS,  
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS  
PRIME AG LAND AG LAND

0.1 (mi)

B. (mi)

C. (mi)

D. (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The Perma-Treat site is located in a mixed commercial/residential area.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., State files, library sources, reports)

J.A. Linebeck, quaternary deposits of Illinois, ISGS, 1975.  
W.A. Pryor, 1956. Groundwater geology of southern Illinois, ISGS, Circular 2.  
U.S. Dept. of Commerce, technical paper #40, 1961.  
IEPA, 1991. CERCLA Preliminary Assessment report.  
USGS, 1966. Topographic map, Marion, IL, 7.5 minute quadrangle.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION  
01 STATE 02 SITE NUMBER  
ILL 063 698 971

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)	02 STATUS	03 DISTANCE TO SITE															
<table><tr><td>SURFACE</td><td>WELL</td></tr><tr><td>COMMUNITY A. <input checked="" type="checkbox"/></td><td>B. <input type="checkbox"/></td></tr><tr><td>NON-COMMUNITY C. <input type="checkbox"/></td><td>D. <input checked="" type="checkbox"/></td></tr></table>	SURFACE	WELL	COMMUNITY A. <input checked="" type="checkbox"/>	B. <input type="checkbox"/>	NON-COMMUNITY C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>	<table><tr><td>ENDANGERED</td><td>AFFECTED</td><td>MONITORED</td></tr><tr><td>A. <input type="checkbox"/></td><td>B. <input type="checkbox"/></td><td>C. <input checked="" type="checkbox"/></td></tr><tr><td>D. <input checked="" type="checkbox"/></td><td>E. <input type="checkbox"/></td><td>F. <input type="checkbox"/></td></tr></table>	ENDANGERED	AFFECTED	MONITORED	A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input checked="" type="checkbox"/>	D. <input checked="" type="checkbox"/>	E. <input type="checkbox"/>	F. <input type="checkbox"/>	A. 3.5 (mi) B. (mi)
SURFACE	WELL																
COMMUNITY A. <input checked="" type="checkbox"/>	B. <input type="checkbox"/>																
NON-COMMUNITY C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>																
ENDANGERED	AFFECTED	MONITORED															
A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input checked="" type="checkbox"/>															
D. <input checked="" type="checkbox"/>	E. <input type="checkbox"/>	F. <input type="checkbox"/>															

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)				
<input type="checkbox"/> A. ONLY SOURCE FOR DRINKING <input checked="" type="checkbox"/> B. DRINKING (Other sources elsewhere) COMMERCIAL INDUSTRIAL IRRIGATION (No other water sources elsewhere) <input checked="" type="checkbox"/> C. COMMERCIAL INDUSTRIAL IRRIGATION (Limited other sources elsewhere) <input type="checkbox"/> D. NOT USED, UNUSEABLE				
02 POPULATION SERVED BY GROUND WATER 4,353		03 DISTANCE TO NEAREST DRINKING WATER WELL 1 (mi)		
04 DEPTH TO GROUNDWATER 15 (ft)	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN 10 (ft)	07 POTENTIAL YIELD OF AQUIFER (gpd)	08 SOLE SOURCE AQUIFER <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and discharge)

The city of Marion is served by surface water intake, Lake Marion. Lake Marion is located 3.5 miles south of the site; however, Lake Marion is not in the downstream target pathway.

10 RECHARGE AREA <input type="checkbox"/> YES <input type="checkbox"/> NO COMMENTS	11 DISCHARGE AREA <input type="checkbox"/> YES <input type="checkbox"/> NO COMMENTS
--	---

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)		
<input checked="" type="checkbox"/> A. RESERVOIR, RECREATION DRINKING WATER SOURCE <input type="checkbox"/> B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES <input type="checkbox"/> C. COMMERCIAL, INDUSTRIAL <input type="checkbox"/> D. NOT CURRENTLY USED		
02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER		
NAME:	AFFECTED	DISTANCE TO SITE
West Creek	<input type="checkbox"/>	0.5 (mi)
Crab Orchard Creek	<input type="checkbox"/>	2 (mi)
Crab Orchard Lake/Wildlife Refuge	<input type="checkbox"/>	7 (mi)

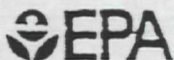
V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN	02 DISTANCE TO NEAREST POPULATION						
<table><tr><td>ONE (1) MILE OF SITE</td><td>TWO (2) MILES OF SITE</td><td>THREE (3) MILES OF SITE</td></tr><tr><td>A. 6,942 NO. OF PERSONS</td><td>B. 15,799 NO. OF PERSONS</td><td>C. 18,040 NO. OF PERSONS</td></tr></table>	ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	A. 6,942 NO. OF PERSONS	B. 15,799 NO. OF PERSONS	C. 18,040 NO. OF PERSONS	0.1 (mi)
ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE					
A. 6,942 NO. OF PERSONS	B. 15,799 NO. OF PERSONS	C. 18,040 NO. OF PERSONS					
03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 3,500	04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.1 (mi)						

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Site is in a mixed use residential and commercial area of Marion, Illinois. Many areas within 1 to 2 miles of the site are densely populated. Most areas beyond 2 miles of the site (outside of Marion) are rural and sparsely populated.





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 8 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
ILD 063 698 971

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
<del>SURFACE WATER</del> sediment	7	IT Analytical Services Export, PA 15632 8806; Southwest Labs of Oklahoma, Broken Arrow, OK 74012	6/94
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	8	Encotec 3985 Research Park, Ann Arbor, MI 48108, Weyerhaeuser Analytical Federal Way, WA 98003	6/94
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Location	
Measurements	Sample locations were measured in feet and inches from fixed structures.

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>BVWS/USEPA files</u> <small>*Name of organization or individual</small>
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS <u>USEPA Region V files</u>

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Air monitor: no readings above background noted on HNu.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state laws, action analysis, records)

USEPA, 1994. Analytical case no. 21759





POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER  
ILD | 063 698 971

II. CURRENT OWNER(S)				PARENT COMPANY (IF APPLICABLE)			
01 NAME Rudy J. Bond		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) P.O. Box 99		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY Marion		06 STATE IL	07 ZIP CODE 62959	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
III. PREVIOUS OWNER(S) (List most recent first)				IV. REALTY OWNER(S) (If applicable, list most recent first)			
01 NAME City of Marion		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY Marion		06 STATE IL	07 ZIP CODE 62959	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
V. SOURCES OF INFORMATION (Cite source reference, e.g., State files, bottom survey, records)							
IEPA, 1991. CERCLA Preliminary Assessment							



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER  
ILD | 063 698 971

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME Hickson Corporation	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.) 1579 Koppers Road	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY Conley	06 STATE GA	07 ZIP CODE 30027	
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	

V. SOURCES OF INFORMATION (Check source information, P.O., State Dept., Sample Analysis, Reports)

IEPA, 1991 CERCLA Preliminary Assessment report.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

ILD 063 698 971

II. CURRENT OPERATOR (Provide if different from owner)				OPERATOR'S PARENT COMPANY (If applicable)			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER					
III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
IV. SOURCES OF INFORMATION (List sources of information, e.g., state laws, nation analysis, records)							



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

1. IDENTIFICATION

01 STATE 02 SITE NUMBER

ILD 063 698 971

PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☒ D. SPILLED MATERIAL REMOVED  
04 DESCRIPTION

02 DATE 1985

03 AGENCY \_\_\_\_\_

Release of chromated copper arsenate to area north of control room.

01 ☒ E. CONTAMINATED SOIL REMOVED  
04 DESCRIPTION

02 DATE 1985

03 AGENCY \_\_\_\_\_

Contaminated soil was neutralized with lime and removed

01 ☐ F. WASTE REPACKAGED  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ G. WASTE DISPOSED ELSEWHERE  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ H. ON SITE BURIAL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ I. IN SITU CHEMICAL TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ J. IN SITU BIOLOGICAL TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ K. IN SITU PHYSICAL TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ L. ENCAPSULATION  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ M. EMERGENCY WASTE TREATMENT  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ N. CUTOFF WALLS  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ P. CUTOFF TRENCHES/SUMP  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_

01 ☐ Q. SUBSURFACE CUTOFF WALL  
04 DESCRIPTION

02 DATE \_\_\_\_\_

03 AGENCY \_\_\_\_\_



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IID 698 971

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ S. CAPPING/COVERING  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ T. BULK TANKAGE REPAIRED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ U. GROUT CURTAIN CONSTRUCTED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ V. BOTTOM SEALED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ W. GAS CONTROL  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ X. FIRE CONTROL  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ Y. LEACHATE TREATMENT  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ Z. AREA EVACUATED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ 1. ACCESS TO SITE RESTRICTED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ 2. POPULATION RELOCATED  
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ 3. OTHER REMEDIAL ACTIVITIES  
04 DESCRIPTION

02 DATE

03 AGENCY

III. SOURCES OF INFORMATION (Cite source references, e.g., State law, State agency, reports)



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

ILD 063 698 971

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

In a June 20, 1991, RCRA inspection, IEPA personnel found restricted waste stored in an onsite waste pile for more than 90 days.

On September 19, 1991, the IEPA notified Perma-Treat that the waste pile was in violation of RCRA requirements for generators and storage sites of hazardous waste.

Subject to numerous conditions and modifications, the IEPA approved Perma-Treat's RCRA closure plan for the waste pile on December 11, 1992. The approved closure plan required soil sampling near the southern and eastern sides of the drip pad.

Perma-Treat appealed the IEPA enforcement action seeking closure of the waste pile. Perma-Treat won the appeal, halting IEPA's RCRA enforcement action.

III. SOURCES OF INFORMATION (Cite source references, e.g., State files, Union analysis, reports)

IEPA RCRA Land Disposal Restriction report, Perma-Treat of Illinois, USEPA ILD 063 698 971, IEPA 1990555010, June 20, 1991.

IEPA Division of Land Pollution Control, in letter to Carolyn Bond, Perma-Treat of Illinois, Inc. September 19, 1991.

IEPA Division of Land Pollution Control, in letter to Carolyn Bond, Perma-Treat of Illinois, Inc., December 11, 1992.

IEPA Division of Land Pollution Control in correspondence to ARCS V Contractor October 26, 1993 and January 14, 1994.

## Appendix C

Perma-Treat of Illinois, Inc.

Target Compound List and  
Target Analyte List

## Target Compound List

### Volatiles

Chloromethane	1,2-Dichloropropane
Bromomethane	Cis-1,3-Dichloropropene
Vinyl Chloride	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropane
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroethene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	Toluene
2-Butanone	1,1,2,2-Tetrachloroethane
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethyl benzene
Bromodichloromethane	Styrene
	Xylenes (total)

Source: Target Compound List for water and soil with low or medium levels of volatile and semi-volatile organic contaminants, as shown in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.



## Target Compound List (Continued)

### Semi-Volatiles

Phenol	Acenaphthene
bis(2-Chloroethyl) ether	2,4-Dinitrophenol
2-Chlorophenol	4-Nitrophenol
1,3-Dichlorobenzene	Dibenzofuran
1,4-Dichlorobenzene	2,4-Dinitrotoluene
1,2-Dichlorobenzene	Diethylphthalate
2-Methylphenol	4-Chlorophenyl-phenyl ether
2,2-oxybis-(1-Chloropropane)*	Fluroene
4-Methylphenol	4-Nitroaniline
N-Nitroso-di-n-dipropylamine	4,6-Dinitro-2-methylphenol
Hexachloroethane	N-Nitrosodiphenylamine
Nitrobenzene	4-Bromophenyl-phenyl ether
Isophorone	Hexachlorobenzene
2-Nitrophenol	Pentachlorophenol
2,4-Dimethylphenol	Phenanthrene
bis(2-Chloroethoxy) methane	Anthracene
2,4-Dichlorophenol	Carbazole
1,2,4-Trichlorobenzene	Di-n-butylphthalate
Naphthalene	Fluoranthene
4-Chloroaniline	Pyrene
Hexachlorobutadiene	Butyl benzyl phthalate
4-Chloro-3-methylphenol	3,3-Dichlorobenzidine
2-Methylnaphthalene	Benzo(a)anthracene
Hexachlorocyclopentadiene	Chrysene
2,4,6-Trichlorophenol	bis(2-Ethylhexyl)phthalate
2,4,5-Trichlorophenol	Di-n-Octylphthalate
2-Chloronaphthalene	Benzo(b)fluoranthene
2-Nitroaniline	Benzo(k)fluoranthene
Dimethylphthalate	Benzo(a)pyrene
Acenaphthylene	Indeno(1,2,3-cd)pyrene
2,6-Dinitrotoluene	Dibenzo(a,h)anthracene
3-Nitroaniline	Benzo(g,h,i)perylene

\*Previously known by the name of bis(2-chloroisopropyl) ether.

Source: Target Compound List for water and soil with low or medium levels of volatile and semi-volatile organic contaminants, as shown in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

## Target Compound List (Continued)

### Pesticide/PCB

alpha-BHC	4,4-DDT
beta-BHC	Methoxychlor
delta-BHC	Endrin ketone
gamma-BHC (Lindane)	Endrin aldehyde
Heptachlor	alpha-chlordane
Aldrin	gamma-chlordane
Heptachlor epoxide	Toxaphene
Endosulfan I	Aroclor-1016
Dieldrin	Aroclor-1221
4,4-DDE	Aroclor-1232
Endrin	Aroclor-1242
Endosulfan II	Aroclor-1248
4,4-DDD	Aroclor-1254
Endosulfan sulfate	Aroclor-1260

Source: Target Compound List for water and soil containing less than high concentrations of pesticides/aroclor, as shown in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

### Target Analyte List

Aluminum	Magnesium
Antimony	Manganese
Arsenic	Mercury
Barium	Nickel
Beryllium	Potassium
Cadmium	Selenium
Calcium	Silver
Chromium	Sodium
Cobalt	Thallium
Copper	Vanadium
Iron	Zinc
Lead	Cyanide

Source: Target Analyte List in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

## Appendix D

Perma-Treat of Illinois, Inc.

Analytical Results

## Appendix D Contents

Data Qualifiers .....	D-2
Analytical Results .....	D-3
Sediment Samples	
Volatile Organic Analysis for Sediment Samples .....	D-3
Volatile Organic Analysis for Sediment Samples	
Tentatively Identified Compounds .....	D-4
Semi-volatile Organic Analysis for Sediment Samples .....	D-5
Semi-volatile Organic Analysis for Sediment Samples,	
Tentatively Identified Compounds .....	D-7
Pesticide and PCB Analysis for Sediment Samples .....	D-11
Inorganic Analysis for Sediment Samples .....	D-12
Soil Samples	
Volatile Organic Analysis for Soil Samples .....	D-13
Semi-volatile Organic Analysis for Soil Samples .....	D-14
Semi-volatile Organic Analysis for Soil Samples,	
Tentatively Identified Compounds .....	D-16
Pesticide and PCB Analysis for Soil Samples .....	D-18
Inorganic Analysis for Soil Samples .....	D-19

Data Qualifiers		
Analysis	Qualifier	Description
Organic	U	Compound was analyzed but not detected. The associated numerical value is the sample quantitation limit.
	J	An estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria with the result less than the sample quantitation limit but greater than zero.
	B	Reported value is less than the CRQL, but greater than the instrument detection limit.
	N	Indicates presumptive evidence of a compound. This flag is used only for TICs.
	D	Analyzed at a secondary dilution factor.
Inorganic	U	Compound was analyzed for but not detected. The associated numerical value is the sample quantitation limit.
	J	An estimated value.
	B	The reported value is less than the CRDL, but greater than or equal to the IDL.
	N	Spiked sample recovery not within control limits.
	W	Post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50 percent of spike absorbance.
	*	Duplicate analysis not within control limits.
	+	Correlation coefficient for the method of standard additions (MSA) is less than 0.995.
	S	The reported value was determined by the MSA.

Volatile Organic Analysis for Sediment Samples							
Perma Treat							
Volatile Compound	Sample Locations and Number						
	Concentration in ug/kg						
	ST01	ST02	ST03	ST04	ST05	ST06	ST07 Background
Chloromethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Bromomethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Vinyl Chloride	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Chloroethane	13 U	15 U	14 U	14 U	16 UJ	18 UJ	18 U
Methylene Chloride	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Acetone	13 UJ	7 J	14 UJ	14 UJ	11 J	10 J	18 UJ
Carbon Disulfide	13 U	15 U	14 U	14 U	16 U	18 U	18 U
1,1-Dichloroethene	13 U	15 U	14 U	14 U	2 J	18 U	18 U
1,1-Dichloroethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
1,2-Dichloroethene (total)	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Chloroform	13 U	15 U	14 U	14 UJB	16 UJB	18 UJB	18 UJB
1,2-Dichloroethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
2-Butanone	13 U	15 U	14 U	14 U	16 UJ	18 UJ	18 U
1,1,1-Trichloroethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Carbon Tetrachloride	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Bromodichloromethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
1,2-Dichloropropane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
cis-1,3-Dichloropropene	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Trichloroethene	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Dibromochloromethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
1,1,2-Trichloroethane	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Benzene	13 U	15 U	14 U	14 U	16 U	18 U	18 U
trans-1,3-Dichloropropene	13 U	15 U	14 U	14 U	16 U	18 U	18 U
Bromoform	13 U	15 U	14 U	14 U	16 U	18 U	18 U
4-Methyl-2-Pentanone	13 U	15 U	14 U	14 UJ	16 UJ	18 UJ	18 U
2-Hexanone	13 U	15 U	14 U	14 UJ	16 UJ	18 UJ	18 U
Tetrachloroethene	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
1,1,2,2-Tetrachloroethane	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
Toluene	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
Chlorobenzene	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
Ethylbenzene	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
Styrene	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
Xylene (total)	13 U	15 U	14 U	14 UJ	16 U	18 U	18 U
Total Number of TICS *	0	0	0	0	1	0	0

\* Number, not concentrations, of tentatively identified compounds (TICs).

sed-vol

Volatile Organic Analysis for Sediment Samples Tentatively Identified Compounds Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample ST05		
Unknown Siloxane	8.097	8 J

tic-vsed

Semivolatile Organic Analysis for Sediment Samples

Perma Treat

Semivolatile Compound	Sample Location and Number						
	Concentrations in ug/kg						
	ST01	ST02	ST03	ST04	ST05	ST06	ST07 Background
Phenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
bis(2-Chloroethyl)Ether	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2-Chlorophenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
1,3-Dichlorobenzene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
1,4-Dichlorobenzene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
1,2-Dichlorobenzene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2-Methylphenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2,2'-oxybis(1-Chloropropane)	420 UJ	490 UJ	480 UJ	460 UJ	520 U	610 U	600 U
4-Methylphenol	420 U	26 J	480 U	460 U	520 U	150 J	600 U
n-Nitroso-Di-n-Propylamine	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Hexachloroethane	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Nitrobenzene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Isophorone	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2-Nitrophenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2,4-Dimethylphenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2,4-Dichlorophenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
1,2,4-Trichlorobenzene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Naphthalene	28 J	50 J	480 U	460 U	62 J	610 U	600 U
4-Chloroaniline	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Hexachlorobutadiene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
bis(2-Chloroethoxy)Methane	420 U	490 U	480 U	460 U	520 U	610 U	600 U
4-Chloro-3-Methylphenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2-Methylnaphthalene	35 J	68 J	26 J	460 U	150 J	56 J	72 J
Hexachlorocyclopentadiene	420 U	490 U	480 U	460 U	520 UJ	610 UJ	600 UJ
2,4,6-Trichlorophenol	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2,4,5-Trichlorophenol	1000 U	1200 U	1200 U	1100 U	1300 U	1500 U	1400 U
2-Chloronaphthalene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2-Nitroaniline	1000 U	1200 U	1200 U	1100 U	1300 U	1500 U	1400 U
Dimethylphthalate	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Acenaphthylene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2,6-Dinitrotoluene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
3-Nitroaniline	1000 U	1200 U	1200 U	1100 U	1300 U	1500 U	1400 U
Acenaphthene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
2,4-Dinitrophenol	1000 U	1200 U	1200 U	1100 U	1300 UJ	1500 UJ	1400 UJ
4-Nitrophenol	1000 U	1200 U	1200 U	1100 U	1300 U	1500 U	1400 U
Dibenzofuran	62 J	120 J	480 U	460 U	68 J	35 J	36 J
2,4-Dinitrotoluene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Diethylphthalate	420 U	490 U	480 U	460 U	520 U	610 U	600 U



Semivolatile Organic Analysis for Sediment Samples (Continued)  
Perma Treat

Semivolatile Compound	Sample Location and Number						
	Concentrations in ug/kg						
	ST01	ST02	ST03	ST04	ST05	ST06	ST07 Background
4-Chlorophenyl-phenylether	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Fluorene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
4-Nitroaniline	1000 U	1200 U	1200 U	1100 U	1300 U	1500 U	1400 U
4,6-Dinitro-2-Methylphenol	1000 U	1200 U	1200 U	1100 U	1300 UJ	1500 UJ	1400 UJ
n-Nitrosodiphenylamine	420 U	490 U	480 U	460 U	520 U	610 U	600 U
4-Bromophenyl-phenylether	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Hexachlorobenzene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Pentachlorophenol	1000 U	1200 U	1200 U	1100 U	1300 U	1500 U	1400 U
Phenanthrene	64 J	99 J	100 J	26 J	340 J	300 J	120 J
Anthracene	420 U	490 U	32 J	460 U	53 J	41 J	600 U
Carbazole	420 U	490 U	480 U	460 U	54 J	58 J	600 U
di-n-Butylphthalate	420 U	490 U	480 U	460 U	520 U	610 U	45 J
Fluoranthene	30 J	45 J	200 J	37 J	600	600 J	150 J
Pyrene	43 J	69 J	250 J	43 J	680 J	720 J	150 J
Butylbenzylphthalate	420 U	490 U	480 U	460 U	520 UJ	610 UJ	600 UJ
3,3'-Dichlorobenzidine	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Benzo(a)Anthracene	420 U	30 J	110 J	460 U	300 J	240 J	65 J
Chrysene	36 J	55 J	160 J	25 J	390 J	400 J	100 J
bis(2-Ethylhexyl)Phthalate	420 UJB	450 UJB	480 UJB	460 UJB	520 UJB	610 UJB	600 UJB
di-n-octylphthalate	420 U	490 U	480 U	460 U	520 U	610 UJ	600 UJ
Benzo(b)Fluoranthene	32 J	46 J	170 J	460 U	420 J	390 J	100 J
Benzo(k)Fluoranthene	24 J	39 J	170 J	460 U	340 J	450 J	75 J
Benzo(a)Pyrene	420 U	53 J	120 J	460 U	340 J	320 J	76 J
Indeno(1,2,3-cd)Pyrene	420 U	38 J	83 J	460 U	320 J	270 J	61 J
Dibenzo(a,h)Anthracene	420 U	490 U	480 U	460 U	520 U	610 U	600 U
Benzo(g,h,i)Perylene	420 U	490 U	85 J	460 U	360 J	330 J	70 J
Total Number of TICs	29	29	25	29	29	30	30

sedim-sv

Semivolatile Organic Analysis for Sediment Samples Tentatively Identified Compounds Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample ST01		
Unknown	2.080	7500 UJB
3-Penten-2-one, 4-methyl-	3.190	180 UJNBA
2-Pentanone, 4-hydroxy-4-met	3.649	12000 UJNBA
Unknown Alkane	12.261	160 J
Unknown Alkane	12.314	190 J
Unknown Alkane	13.232	170 J
Unknown Organic Acid	14.512	230 J
Unknown Alkane	15.559	180 J
Unknown Amide	16.243	160 UJB
Unknown Amide	17.551	1800 UJB
Unknown	18.092	390 J
Unknown Alkane	18.330	490 J
Unknown Alkane	18.676	340 J
Unknown Alkane	18.975	320 J
Unknown Alkane	19.308	620 J
Unknown	19.594	350 J
Unknown Amide	20.145	830 UJB
Unknown	20.377	430 UJB
Unknown	20.581	490 J
Unknown	20.690	460 J
Unknown	20.812	760 J
Unknown	21.362	470 J
Unknown	21.538	260 J
Unknown	22.100	770 J
Unknown	22.140	610 J
Unknown	22.625	800 J
Unknown Alkane	23.578	240 J
Unknown	23.839	250 J
Unknown	25.578	740 UJB
Sample ST02		
Unknown	2.120	7900 UJB
Unknown	2.186	450 JB
2-Pentanone, 4-hydroxy-4-met	3.671	13000 UJNBA
Unknown Alkane	12.267	250 J
Unknown Alkane	12.320	260 J
Unknown Alkane	13.233	270 J
Unknown	14.398	360 J
Unknown Organic Acid	14.552	790 J
Unknown	16.615	710 J
Unknown Amide	17.570	2000 UJB
Unknown Alkane	18.350	810 J
Unknown Alkane	19.339	930 J
Unknown	19.621	460 J
Unknown Alkane	19.814	720 J
Unknown Amide	20.159	930 UJB
Unknown	20.400	750 JB
Unknown	20.607	980 J
Unknown Alkane	20.711	860 J
Unknown	20.849	1300 J
Unknown	21.380	830 J
Unknown Alkane	21.765	960 J
Unknown	22.127	1100 J
Unknown	22.168	640 J
Unknown	22.651	1400 J
Unknown	23.315	640 J
Unknown	23.390	810 J

Semivolatile Organic Analysis for Sediment Samples Tentatively Identified Compounds (Continued) Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample ST02 (Continued)		
Unknown Alkane	24.354	660 J
Unknown	24.864	540 J
Unknown	25.594	820 UJB
Sample ST03		
Unknown	2.146	7900 UJB
Unknown	2.212	250 J
3-Penten-2-one, 4-methyl-	3.217	200 UJNBA
2-Pentanone, 4-hydroxy-4-met	3.677	11000 UJNBA
Unknown	11.406	240 UJB
Unknown	12.223	190 J
Unknown Alkane	12.315	130 J
Unknown Organic Acid	13.371	120 J
Unknown Organic Acid	14.389	290 J
Unknown	14.448	100 J
Unknown Organic Acid	14.528	480 J
Unknown Organic Acid	15.934	110 J
Unknown Organic Acid	16.054	140 J
Unknown Amide	16.240	160 UJB
Unknown Alkane	16.991	120 J
Unknown Amide	17.550	1100 UJB
Unknown Alkane	17.663	130 J
Unknown Alkane	19.528	160 J
Unknown Amide	20.128	1300 UJB
Unknown Alkane	20.662	490 J
Unknown Alkane	21.729	850 J
Unknown Alkane	22.907	240 J
Unknown	23.240	220 J
Unknown	23.406	220 J
Unknown	25.575	1100 UJB
Sample ST04		
Unknown	2.094	6300 UJB
3-Penten-2-one, 4-methyl-	3.197	180 UJNBA
2-Pentanone, 4-hydroxy-4-met	3.657	11000 UJNBA
Unknown	11.407	260 UJB
Unknown Cycloalkane	12.223	300 J
Unknown Organic Acid	13.373	260 J
Unknown Hydrocarbon	14.374	130 J
Unknown Organic Acid	14.512	310 J
Unknown Amide	14.664	110 J
Unknown Hydrocarbon	14.855	110 J
Unknown	14.980	110 J
Unknown Organic Acid	15.929	170 J
Unknown Amide	16.120	250 J
Unknown Amide	16.239	260 UJB
Unknown Amide	17.545	2300 UJB
Unknown Alkane	17.664	160 J
Unknown Alkane	18.310	140 J
Unknown Hydrocarbon	18.370	140 J
Unknown Alkane	19.531	250 J
Unknown Amide	20.132	1400 UJB
Unknown Alkane	20.661	1000 J
Unknown	20.807	240 J
Unknown Alkane	21.734	1300 J
Unknown Alkane	22.906	540 J

Semivolatile Organic Analysis for Sediment Samples Tentatively Identified Compounds (Continued) Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample ST04 (Continued)		
Unknown	23.370	390 J
Unknown	23.423	1200 J
Unknown	24.318	230 J
Unknown	24.821	180 J
Unknown	25.575	350 UJB
Sample ST05		
Unknown	2.126	8400 UJB
Unknown	2.192	230 J
3-Penten-2-one, 4-methyl-	3.217	190 UJNBA
2-Pentanone, 4-hydroxy-4-met	3.676	10000 UJNBA
Naphthalene, -dimethyl-	9.805	150 J
Unknown Alkane	9.997	280 J
Unknown	11.414	140 UJB
Dibenzofuran, -methyl-	11.964	180 J
Unknown	12.238	380 J
Unknown Alkane	12.271	150 J
Unknown Alkane	12.324	560 J
Unknown Organic Acid	13.396	270 J
Unknown Alkane	13.997	160 J
Unknown Organic Acid	14.412	560 J
Unknown	14.479	200 J
Unknown Organic Acid	14.560	910 J
Unknown Amide	14.707	170 J
Unknown	14.895	210 J
Unknown Alkane	15.565	210 J
Unknown Amide	16.265	260 UJB
Unknown Alkane	16.298	260 J
Unknown Amide	17.564	2000 UJB
Unknown Alkane	18.327	280 J
Unknown Alkane	19.549	300 J
Unknown Amide	20.150	1100 UJB
Unknown Alkane	20.677	700 J
Unknown Alkane	21.745	680 J
Unknown Alkane	22.923	380 J
Unknown	25.604	920 UJB
Sample ST06		
Unknown	2.107	6600 UJB
Unknown	2.172	230 JB
3-Penten-2-one, 4-methyl-	3.210	220 UJNBA
2-Pentanone, 4-hydroxy-4-met	3.657	11000 UJNBA
Unknown Alkane	9.994	160 J
Unknown Cycloalkane	12.236	530 J
Unknown Alkane	12.269	170 J
Unknown Alkane	12.322	330 J
Unknown Organic Acid	12.839	170 J
Unknown	12.892	220 J
Unknown Alkane	13.238	190 J
Unknown Organic Acid	13.391	350 J
Unknown Hydrocarbon	13.471	230 J
Unknown Organic Acid	14.411	690 J
Unknown Organic Acid	14.471	220 J
Unknown Organic Acid	14.551	1200 J
Unknown	15.240	210 J
Unknown Alkane	15.568	190 J

Semivolatile Organic Analysis for Sediment Samples Tentatively Identified Compounds (Continued) Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample ST06 (Continued)		
Unknown	15.957	500 J
Unknown Organic Acid	16.072	500 J
Unknown Amide	17.564	1600 UJB
Unknown Alkane	18.324	320 J
Unknown Alkane	19.543	350 J
Unknown Amide	20.149	1200 UJB
Unknown Alkane	20.681	1200 J
Unknown Alkane	21.743	980 J
Unknown	22.092	470 J
Unknown	23.753	530 J
Unknown	24.340	520 J
Unknown	25.598	790 UJB
Sample ST07 (Background)		
Unknown	2.133	9700 UJB
Unknown	2.330	180 J
3-Penten-2-one, 4-methyl-	3.217	250 UJNBA
2-Pentanone, 4-hydroxy-4-met	3.677	13000 UJNBA
Unknown Alkane	9.999	210 J
Unknown Cycloalkane	12.233	430 J
Unknown Alkane	12.320	510 J
Unknown Organic Acid	13.395	400 J
Unknown Organic Acid	13.468	220 J
Unknown Organic Acid	14.406	460 J
Unknown Organic Acid	14.466	190 J
Unknown Organic Acid	14.546	740 J
Unknown Amide	14.693	170 J
Unknown	15.949	180 J
Unknown Amide	16.143	570 UJB
Unknown Amide	16.264	440 UJB
Unknown Alkane	17.000	300 J
Unknown Amide	17.569	3800 UJB
Unknown Alkane	17.677	370 J
Unknown Alkane	18.326	440 J
Unknown Alkane	19.545	620 J
Unknown Amide	20.148	1300 UJB
Unknown Alkane	20.677	1600 J
Unknown Hydrocarbon	20.797	430 J
Unknown Alkane	21.748	1400 J
Unknown Alkane	22.925	490 J
gamma-Sitosterol	23.752	850 JN
Unknown	23.973	430 J
Unknown	24.353	730 J
Unknown	25.603	1000 UJB

tic-sed

Pesticide/PCB Analysis for Sediment Samples							
Perma Treat							
Pesticide/ PCB	Sample Location and Number						
	Concentrations in ug/kg						
	ST01	ST02	ST03	ST04	ST05	ST06	ST07 Background
Alpha-BHC	2.2 U	2.5 U	2.5 U	2.4 U	2.7 U	3.1 U	3.1 U
Beta-BHC	2.2 U	2.5 U	2.5 U	2.4 U	2.7 U	3.1 U	3.1 U
Delta-BHC	2.2 U	2.5 U	2.5 U	2.4 U	2.7 U	5.7	3.4
Gamma-BHC (Lind.)	2.2	2.5 U	2.5 U	2.4 U	2.7 U	3.1 U	3.1 U
Heptachlor	2.2 U	2.5 U	2.5 U	2.4 U	3.2 P	3.1 U	3.8 P
Aldrin	2.2 U	2.5 U	2.5 U	2.4 U	2.7 U	3.1 U	3.1 U
Heptachlor Epoxide	2.2 U	2.5 U	2.5 U	2.4 U	5.0 P	3.1 U	3.1 U
Endosulfan I	2.2 U	2.5 U	2.5 U	2.4 U	2.7 U	3.1 U	3.1 U
Dieldrin	4.2 U	4.9 U	16 P	4.6 U	13 P	6.2 P	6.0 U
4,4'-DDE	4.2 U	4.9 U	4.8 U	4.6 U	5.2 U	6.1 U	6.0 U
Endrin	4.2 U	4.9 U	4.9 P	4.6 U	20 P	11 P	13 P
Endosulfan II	4.2 U	4.9 U	4.8 U	4.6 U	11 P	10 P	6.0 U
4,4'-DDD	4.2 U	4.9 U	4.8 U	4.6 U	5.2 U	6.1 U	6.0 U
Endosulfan Sulfate	22 U	4.9 U	4.8 U	4.6 U	5.2 U	6.1 U	6.0 U
4,4'-DDT	4.2 U	4.9 U	4.8 U	4.6 U	11 P	8.6 P	15 P
Methoxychlor	22 U	25 U	25 U	24 U	27 U	31 U	31 U
Endrin Ketone	4.2 U	4.9 U	4.8 U	4.6 U	5.2 U	6.1 U	6.0 U
Endrin Aldol, etc	14 P	16	4.8 P	4.6 U	16 P	19 P	8.3 P
Alpha-Chlordane	2.6 P	2.5 U	39 JPD	4.6 U	39 P	19 P	4.7 P
Gamma-Chlordane	2.7 P	2.5 U	37 P	2.4 U	35 P	20 P	5.0 P
Toxaphene	220 U	250 U	250 U	240 U	270 U	310 U	310 U
Aroclor-1016	42 U	49 U	48 U	46 U	52 U	61 U	60 U
Aroclor-1221	85 U	100 U	97 U	94 U	110 U	120 U	120 U
Aroclor-1232	42 U	49 U	48 U	46 U	52 U	61 U	60 U
Aroclor-1242	42 U	49 U	48 U	46 U	52 U	61 U	60 U
Aroclor-1248	42 U	49 U	48 U	46 U	52 U	61 U	60 U
Aroclor-1254	42 U	49 U	48 U	46 U	52 U	61 U	60 U
Aroclor-1260	42 U	49 U	48 U	46 U	52 U	61 U	60 U

pestsed

Inorganic Analysis for Sediment Samples Perma Trea.							
Metals and Cyanide	Sample Location and Number						
	Concentrations in mg/kg						
	ST01	ST02	ST03	ST04	ST05	ST06	ST07 Background
Aluminum	2350 *	7570 *	9690 *	4950 *	12800 *	15800 *	9350 *
Antimony	4.5 UJN	6.6 JBN	5.1 UJN	4.9 UJN	6.6 UJN	7.7 UJN	6.2 UJN
Arsenic	163 *	179 *	23.0 *	5.3 *	9.9 *	10.7 *	7.3 *
Barium	47.5 B	101	111	91.5	148	141	113
Beryllium	0.20 B	0.50 B	0.73 B	0.37 B	0.79 B	0.64 B	0.62 B
Cadmium	1.0 U	1.2 U	1.1 U	1.1 U	1.7 B	1.7 U	1.4 U
Calcium	93200	68800	5570	1100 B	13800	12100	3130
Chromium	114	130	20.7	8.8	19.0	16.1	11.7
Cobalt	3.5 B	7.4 B	8.2 B	4.6 B	11.5 B	8.6 B	9.6 B
Copper	95.9	114	12.9	8.1	57.1	85.9	29.0
Iron	7260 J*	14100 J*	22400 J*	8910 J*	16700 J*	15600 J*	16900 J*
Lead	8.6 *	24.6 *	35.2 *	35.9 *	174 *	81.4 *	39.3 *
Magnesium	8180	6150	1520	625 B	2630	2520	1650
Manganese	286	525	495	1260	1360	3390	1220
Mercury	0.13 U	0.15 U	0.15 U	0.14 U	0.19 U	0.22 U	0.18 U
Nickel	7.2 B	14.6	10.7 B	4.2 B	26.8	15.3 B	12.1 B
Potassium	491 B	1070 B	601 B	436 B	680 B	700 B	680 B
Selenium	0.44 U	0.52 U	0.99 B	0.59 B	0.64 U	0.74 U	0.60 U
Silver	0.46 U	0.55 U	0.52 U	0.57 B	0.67 U	0.79 U	1.1 B
Sodium	132 B	225 B	160 B	63.0 B	295 B	254 B	176 B
Thallium	1.2 U	1.4 U	1.3 U	1.3 U	1.7 U	2.0 U	1.6 U
Vanadium	7.5 B	19.4	40.2	18.5	22.0	19.9 B	16.4 B
Zinc	84.8	78.5	67.4	42.4	225	177	98.1
Cyanide	3.2 U	3.9 U	3.6 U	3.5 U	4.7 U	5.5 U	4.4 U

sedmetal



Volatile Organic Analysis for Soil Samples Perma Treat								
Volatile Compound	Sample Locations and Number Concentrations in ug/kg							
	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08 Background
Chloromethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Bromomethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Vinyl Chloride	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Chloroethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Methylene Chloride	15 UB	30 UB	12 UJB	11 UJB	14 UB	15 UB	12 UJB	13 UB
Acetone	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Carbon Disulfide	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,1-Dichloroethene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,1-Dichloroethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,2-Dichloroethene (total)	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Chloroform	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,2-Dichloroethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
2-Butanone	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,1,1-Trichloroethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Carbon Tetrachloride	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Bromodichloromethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,2-Dichloropropane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
cis-1,3-Dichloropropene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Trichloroethene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Dibromochloromethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,1,2-Trichloroethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Benzene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
trans-1,3-Dichloropropene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Bromoform	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
4-Methyl-2-Pentanone	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
2-Hexanone	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Tetrachloroethene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
1,1,2,2-Tetrachloroethane	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Toluene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Chlorobenzene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Ethylbenzene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Styrene	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Xylene (total)	12 U	22 U	12 U	11 U	13 U	12 U	12 U	13 U
Total Number of TICs *	0	0	0	0	0	0	0	0

\* Number, not concentrations, of tentatively identified compounds (TICs).

SOIL-VOL



## Semivolatile Organic Analysis for Soil Samples

Perma Treat

Semivolatile Compound	Sample Location and Number							
	Concentrations in ug/kg							
	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08 Background
Phenol	29 J	37 J	20 J	20 J	27 J	400 U	380 U	420 U
bis(2-Chloroethyl)Ether	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2-Chlorophenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
1,3-Dichlorobenzene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
1,4-Dichlorobenzene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
1,2-Dichlorobenzene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2-Methylphenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,2'-oxybis(1-Chloropropane	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
4-Methylphenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	29 J
n-Nitroso-Di-n-Propylamine	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Hexachloroethane	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Nitrobenzene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Isophorone	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2-Nitrophenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,4-Dimethylphenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
bis(2-Chloroethoxy)Methane	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,4-Dichlorophenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
1,2,4-Trichlorobenzene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Naphthalene	410 U	730 U	42 J	70 J	420 U	400 U	380 U	31 J
4-Chloroaniline	410 UJ	730 UJ	400 UJ	370 UJ	420 UJ	400 UJ	380 UJ	420 UJ
Hexachlorobutadiene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
4-Chloro-3-Methylphenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2-Methylnaphthalene	410 U	730 U	46 J	85 J	420 U	400 U	380 U	61 J
Hexachlorocyclopentadiene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,4,6-Trichlorophenol	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,4,5-Trichlorophenol	990 U	1800 U	960 U	890 U	1000 U	960 U	930 U	1000 U
2-Chloronaphthalene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2-Nitroaniline	990 U	1800 U	960 U	890 U	1000 U	960 U	930 U	1000 U
Dimethyl Phthalate	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Acenaphthylene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,6-Dinitrotoluene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
3-Nitroaniline	990 UJ	1800 UJ	960 UJ	890 UJ	1000 UJ	960 UJ	930 UJ	1000 UJ
Acenaphthene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
2,4-Dinitrophenol	990 UJ	730 U	960 UJ	890 UJ	1000 UJ	960 UJ	930 UJ	1000 UJ
4-Nitrophenol	990 U	730 U	960 U	890 U	1000 U	960 U	930 U	1000 U
Dibenzofuran	410 U	730 U	84 J	170 J	420 U	400 U	380 U	420 U
2,4-Dinitrotoluene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Diethylphthalate	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
4-Chlorophenyl-phenylether	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Fluorene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
4-Nitroaniline	990 UJ	730 U	960 UJ	890 UJ	1000 UJ	960 UJ	930 UJ	1000 UJ
4,6-Dinitro-2-Methylphenol	990 U	730 U	960 U	890 U	1000 U	960 U	930 U	1000 U
n-Nitrosodiphenylamine	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
4-Bromophenyl-phenylether	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U

Semivolatile Organic Analysis for Soil Samples (Continued)

Perma Treat

Semivolatile Compound	Sample Location and Number							
	Concentrations in ug/kg							
	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08 Background
Hexachlorobenzene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Pentachlorophenol	990 U	1800 U	960 U	890 U	1000 U	960 U	930 U	1000 U
Phenanthrene	25 J	730 U	86 J	150 J	420 U	400 U	380 U	120 J
Anthracene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Carbazole	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
di-n-Butylphthalate	410 UJB	730 UJB	400 UJB	370 UJB	420 UJB	400 U	380 U	420 UJB
Fluoranthene	39 J	64 J	24 J	63 J	22 J	400 U	380 U	170 J
Pyrene	39 J	58 J	70 J	100 J	32 J	400 U	380 U	180 J
Butylbenzylphthalate	410 U	730 U	98 J	130 J	420 U	400 U	380 U	420 U
3,3'-Dichlorobenzidine	410 UJ	730 UJ	400 UJ	370 UJ	420 UJ	400 UJ	380 UJ	420 UJ
Benzo(a)Anthracene	410 U	730 U	400 U	38 J	420 U	400 U	380 U	69 J
Chrysene	31 J	37 J	400 U	64 J	420 U	400 U	380 U	140 J
bis(2-Ethylhexyl)Phthalate	410 UJB	730 UJB	2000 B	370 U	420 UJB	400 UJB	380 UJB	420 UJB
di-n-Octyl Phthalate	410 UJ	730 U	400 UJ	370 UJ	420 UJ	400 UJ	380 UJ	420 UJ
Benzo(b)Fluoranthene	24 J	60 J	400 U	61 J	26 J	400 U	380 U	92 J
Benzo(k)Fluoranthene	24 J	730 U	400 U	370 U	420 U	400 U	380 U	100 J
Benzo(a)Pyrene	21 J	730 U	400 U	63 J	420 U	400 U	380 U	82 J
Indeno(1,2,3-cd)Pyrene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	53 J
Benzo(a,h,i)Anthracene	410 U	730 U	400 U	370 U	420 U	400 U	380 U	420 U
Benzo(g,h,i)Perylene	410 UJ	730 UJ	400 UJ	370 UJ	420 UJ	400 UJ	380 UJ	73 J
Total Number of TICs	13	14	20	20	12	9	20	20

soil-sv

Semivolatile Organic Analysis for Soil Samples Tentatively Identified Compounds Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample SS01		
2-Cyclohexe-1-OL	5.53	130 UJBN
Unknown	6.02	640 J
Unknown	6.08	520 J
Unknown	6.38	170 J
5,5-Dimethylethyl-2(5H)-Fura	6.72	520 JN
1-Phenyl Ethanone	9.08	120 JN
2H-1-Benzopyran-2-One	15.48	310 JN
1-(1,1-Dimethylethyl)-2-Meth	17.70	210 UJBN
Unknown	18.92	140 J
Unknown Alkane	28.92	52 J
Unknown	29.60	95 J
Unknown Alkane	30.87	120 J
Unknown Alkane	31.97	93 J
Sample SS02		
2-Cyclohexen-1-OL	5.47	170 UJBN
Unknown	6.00	1900 J
Unknown	6.30	440 J
5,5-Diemthy-2(5H)-Furanone	6.63	1300 JN
Unknown	8.65	200 J
1-(1,1-Diemthylethyl)-2-Meth	17.63	300 UJB
Unknown	18.03	250 J
Unknown	18.83	330 J
Unknown Organic Acid	26.35	260 UJB
Unknown	29.50	290 J
Unknown Alkane	30.32	670 J
Unknown Alkane	31.87	850 J
Unknown	37.58	560 J
Unknown	37.82	160 J
Sample SS03		
Unknown Alkane	27.10	2300 J
Unknown	27.38	880 J
Unknown	27.50	950 J
Unknown Alkane	27.95	1400 J
Unknown Alkane	28.22	900 J
Unknown Alkane	28.42	1900 J
Unknown Alkane	28.62	1200 J
Unknown Alkane	28.68	1100 J
Unknown Alkane	28.75	1300 J
Unknown Alkane	28.97	1400 J
Unknown Alkane	29.05	1100 J
Unknown Alkane	29.15	1100 J
Unknown Alkane	29.22	1000 J
Unknown	29.28	990 J
Unknown	29.37	940 J
Unknown	29.53	810 J
Unknown	29.67	760 J
Unknown	29.88	720 J
Unknown Alkane	29.98	970 J
Unknown	30.28	740 J

Semivolatile Organic Analysis for Soil Samples Tentatively Identified Compounds (Continued) Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample SS04		
Unknown	6.07	840 J
Unknown Alkane	24.97	660 J
Unknown Alkane	25.55	860 J
Unknown Alkane	25.88	950 J
Unknown Alkane	26.47	1800 J
Unknown Alkane	26.67	920 J
Unknown Alkane	27.33	2600 J
Unknown Alkane	27.63	1000 J
Unknown Alkane	27.80	1800 J
Unknown Alkane	28.17	1500 J
Unknown Alkane	28.47	980 J
Unknown Alkane	28.65	1800 J
Unknown Alkane	28.90	950 J
Unknown Alkane	28.97	1200 J
Unknown Alkane	29.28	1200 J
Unknown Alkane	29.40	980 J
Unknown Alkane	29.50	910 J
Unknown Alkane	30.22	1300 J
Unknown	30.52	1100 J
Unknown Alkane	30.60	940 J
Sample SS05		
2-Cyclohexen-1-OL	5.55	93 UJBN
Unknown	6.10	1200 J
Unknown	6.40	210 J
5,5,-Dimethyl-2(5H)-Furanone	6.73	690 JN
Unknown	8.73	120 J
1,(1,1-Dimethylethyl)-2-Meth	17.72	210 UJBN
Unknown	29.63	120 J
Unknown	30.60	120 J
Unknown Alkane	32.02	150 J
Unknown	32.32	110 J
Unknown	33.15	120 J
Unknown	37.78	300 J
Sample SS06		
2-Cyclohexen-1-OL	5.47	100 UJBN
Unknown	6.02	1100 J
Unknown	6.32	210 J
5,5,-Dimethyl-2(5H)-Furanone	6.65	370 JN
Unknown	8.65	150 J
1,(1,1-Dimethylethyl)-2-Meth	17.62	180 UJBN
Unknown	18.83	100 J
Unknown Alkane	30.35	110 J
Unknown Alkane	31.92	140 J

Semivolatile Organic Analysis for Soil Samples Tentatively Identified Compounds (Continued) Perma Treat Concentrations in ug/kg		
Compound Name	Retention Time	Estimated Concentration
Sample SS07		
2-Cyclohexen-1-OL	5.53	89 UJBN
Unknown	6.07	1000 J
Unknown	6.37	330 J
5,5,-Dimethy-2(5H)-Furanone	6.70	350 JN
Unknown	8.72	160 J
1,(1,1-Diemethylethyl)-2-Methy	17.70	220 UJBN
Unknown Alkane	28.20	87 J
Unknown Alkane	28.95	120 J
Unknown Alkane	29.72	100 J
Unknown	30.35	210 J
Unknown Alkane	30.45	440 J
Unknown Alkane	30.58	170 J
Unknown Alkane	31.02	100 J
Unknown Alkane	31.70	160 J
Unknown	32.03	310 J
Unknown	32.32	130 J
Unknown	33.17	120 J
Unknown Alkane	34.10	91 J
Unknown	34.57	130 J
Unknown	35.30	110 J
Sample SS08 Background		
Unknown	6.07	1100 J
Unknown	6.37	610 UJB
5,5,-Dimethyl-2(5H)-Furanone	6.70	370 JN
Unknown	8.72	190 J
1,(1,1-Diemethylethyl)-2-Methy	17.70	240 UJBN
Unknown	19.78	210 J
Unknown	23.08	150 J
Unknown	23.15	150 J
Unknown Alkane	26.47	120 J
Unknown Alkane	28.93	120 J
Unknown	29.38	110 J
Unknown	29.72	110 J
Unknown Alkane	30.45	290 J
Unknown	30.62	210 J
Unknown	30.97	180 J
Unknown Alkane	32.02	220 J
Unknown	32.58	360 J
Unknown Alkane	32.67	230 J
Unknown	34.73	180 J
Unknown	34.87	150 J

tic-soil

Pesticide/PCB Analysis for Soil Samples								
Perma Treat								
Pesticide/ PCB	Sample Location and Number							
	Concentrations in ug/kg							
	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08 Background
Alpha-BHC	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Beta-BHC	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Delta-BHC	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Gamma-BHC (Lindane)	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Heptachlor	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Aldrin	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Heptachlor Epoxide	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Endosulfan I	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Dieldrin	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
4,4'-DDE	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
Endrin	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
Endosulfan II	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
4,4'-DDD	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
Endosulfan Sulfate	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
4,4'-DDT	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
Methoxychlor	21 UJ	38 UJ	20 UJ	19 UJ	22 UJ	20 UJ	20 UJ	4.2 UJ
Endrin Ketone	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	22 UJ
Endrin Aldehyde	4.1 UJ	7.3 UJ	4.0 UJ	3.7 UJ	4.2 UJ	4.0 UJ	3.8 UJ	4.2 UJ
Alpha-Chlordane	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	4.2 UJ
Gamma-Chlordane	2.1 UJ	3.8 UJ	2.0 UJ	1.9 UJ	2.2 UJ	2.0 UJ	2.0 UJ	2.2 UJ
Toxaphene	210 UJ	380 UJ	200 UJ	190 UJ	220 UJ	200 UJ	200 UJ	220 UJ
Aroclor-1016	41 UJ	73 UJ	40 UJ	37 UJ	42 UJ	40 UJ	38 UJ	42 UJ
Aroclor-1221	83 UJ	150 UJ	81 UJ	74 UJ	85 UJ	81 UJ	78 UJ	85 UJ
Aroclor-1232	41 UJ	73 UJ	40 UJ	37 UJ	42 UJ	40 UJ	38 UJ	42 UJ
Aroclor-1242	41 UJ	73 UJ	40 UJ	37 UJ	42 UJ	40 UJ	38 UJ	42 UJ
Aroclor-1248	41 UJ	73 UJ	40 UJ	37 UJ	42 UJ	40 UJ	38 UJ	42 UJ
Aroclor-1254	41 UJ	73 UJ	40 UJ	37 UJ	42 UJ	40 UJ	38 UJ	42 UJ
Aroclor-1260	41 UJ	73 UJ	40 UJ	37 UJ	42 UJ	40 UJ	38 UJ	42 UJ

Inorganic Analysis for Soil Samples Perma Treat								
Metals and Cyanide	Sample Locations and Number Concentrations in mg/kg							
	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08 Background
Aluminum	17200	16800	10900	6750	11000	15100	15200	5450
Antimony	4.2 UJN	7.2 UJN	18.9 JN	8.3 UJN	5.1 JBN	4.7 UJN	5.2 UJN	5.0 UJN
Arsenic	11.1 JS*	46.9 J*	5490 J*	193 JS*	348 J*	175 J*	636 J*	11.5 J*
Barium	403	136	112	69.5	205	118	124	74.9
Beryllium	0.87 B	0.82 B	0.52 B	0.38 B	0.80 B	0.69 B	0.73 B	0.81 B
Cadmium	0.83 U	1.4 U	1.0 U	0.77 U	0.96	0.94 U	1.0 U	1.00 U
Calcium	11100	5320	102000	167000	15700	11200	10700	24700
Chromium	26.1	39.0	2640	159	1700	157	266	14.2
Cobalt	21.3	9.5 B	6.1 B	4.7 B	27.0	8.5 B	7.8 B	10.7 B
Copper	19.0 JN	45.1 JN	2510 JN	132 JN	1430 JN	151 JN	427 JN	8.2 JN
Iron	22200 JE	20900 JE	13200 JE	9760 JE	33900 JE	18000 JE	19400 JE	20100 JE
Lead	16.7	25.0	31.7	11.2	114	14.6	15.9	22.5
Magnesium	2740	2460	7910	11500	4330	2300	3960	3170
Manganese	2780 JE	526 JE	529 JE	332 JE	1440 JE	421 JE	375 JE	1000 JE
Mercury	0.06 UJN	0.09 JBN	0.10 JBN	0.05 UJN	0.06 JBN	0.06 UJN	0.06 UJBN	0.06 UJN
Nickel	19.6	24.5	14.7	14.3	33.2	17.2	18.3	14.4
Potassium	1570	1610	1490	1570	1100	834	1240	356 U
Selenium	0.41 JBN	0.54 JBN	0.81 JBN	0.43 JBNW	0.31 JBNW	0.19 JBN	0.52 JBN	0.34 JBN
Silver	0.79 U	1.4 U	0.99 U	0.73 U	0.80 U	0.90 U	1.00 U	0.95 U
Sodium	107 B	64.8 B	152 B	177 B	113 B	54.5 B	73.5 B	114 B
Thallium	0.27 B	0.30 B	0.16 U	0.12 JBW	0.25 B	0.19 B	0.18 B	0.16 U
Vanadium	39.1	32.2	24.0	14.2	25.2	32.8	30.8	28.0
Zinc	56.4 JEN*	75.1 JEN*	126 JEN*	79.3 JEN*	232 JEN*	41.6 JEN*	49.3 JEN*	84.8 JEN*
Cyanide	0.63 U	0.93 U	0.62 U	0.60 U	0.63 U	0.61 U	0.58 U	0.66 U

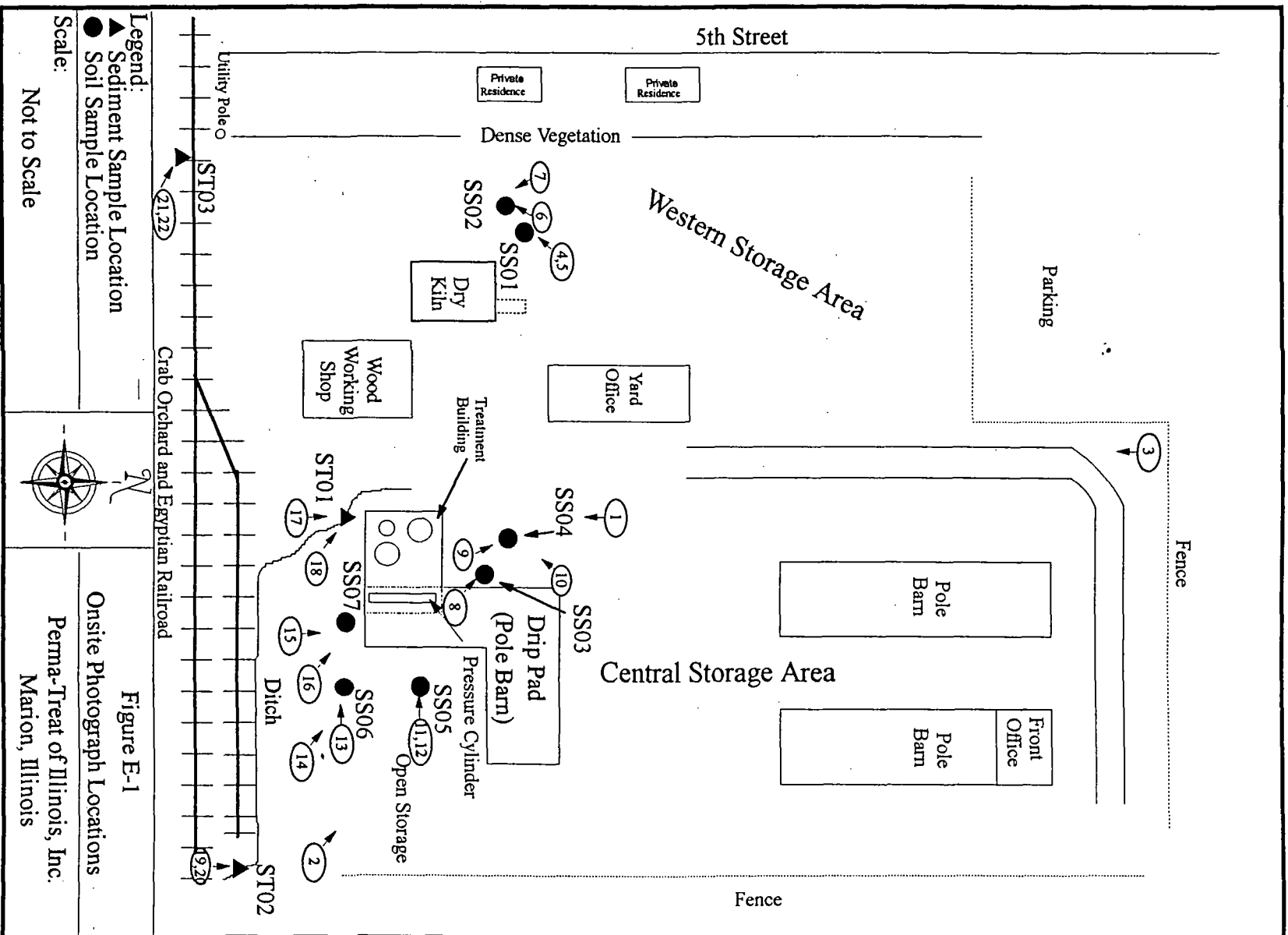
soilmet

Appendix E

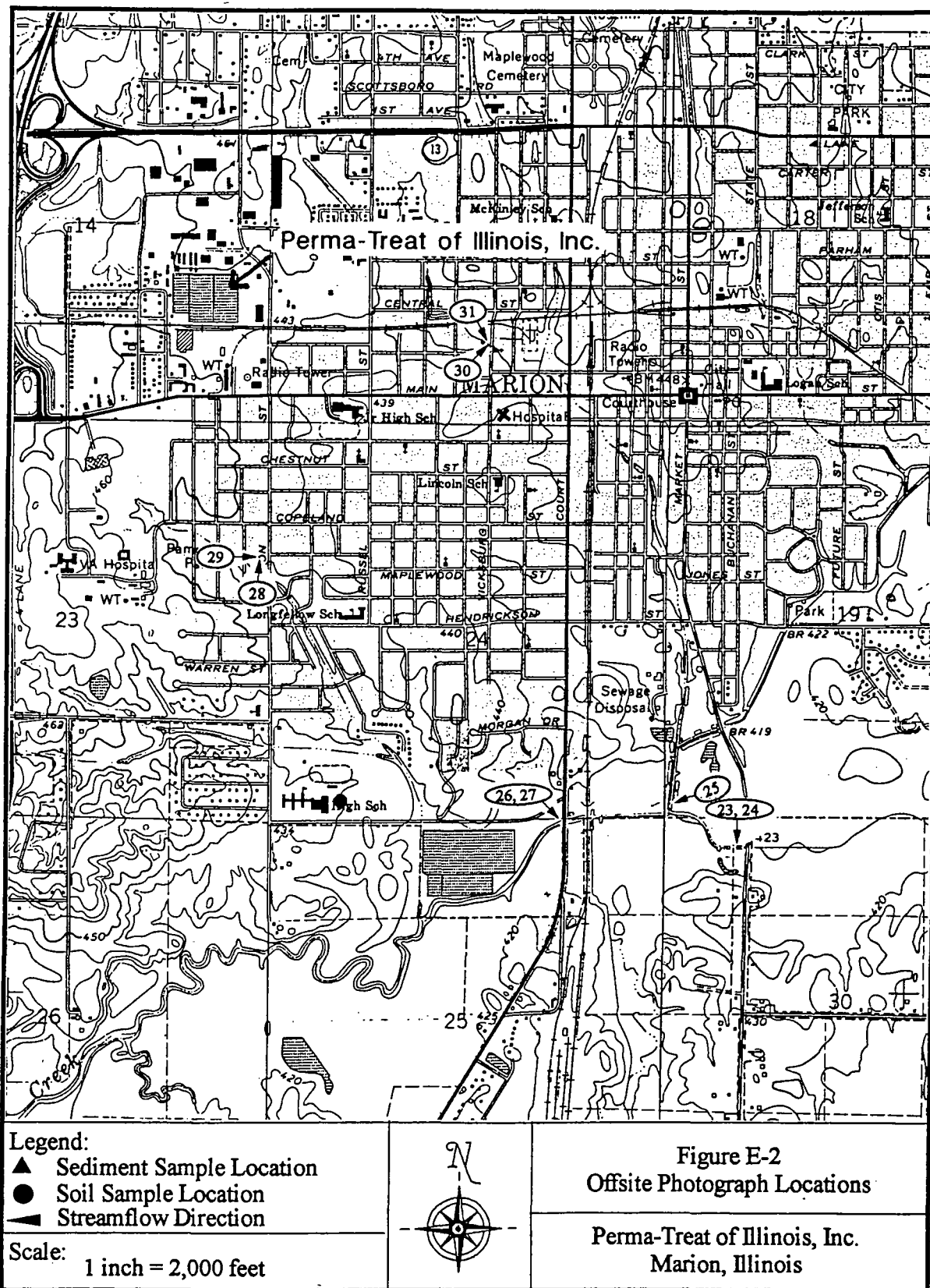
Perma-Treat of Illinois, Inc.

Site Photographs





FRE00155  
9-25-94



FRE00156  
9.19.94

**Date:** 7/29/93

**Time:** 0940

**Photo Taken By:** M. Lee

**Photo Number:** 01

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of photo:** South

**Description:** Area north of  
treatment building, exposed to  
chromated copper arsenate release  
in 1988.



**Date:** 7/29/93

**Time:** 0950

**Photo Taken By:** M. Lee

**Photo Number:** 02

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** Southeast side of  
treatment building and drip pad.





**Date:** 7/29/93

**Time:** 1040

**Photo Taken By:** M. Lee

**Photo Number:** 03

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of photo:** South

**Description:** View of central  
yard from northwest corner of site.



**Date:** 3/23/94

**Time:** 0850

**Photo Taken By:** J. Albano

**Photo Number:** 04

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southwest

**Description:** Soil sample  
location SS01.





**Date:** 3/23/94

**Time:** 0852

**Photo Taken By:** J. Albano

**Photo Number:** 05

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southwest

**Description:** Expanded view of  
soil sample location SS01.



**Date:** 3/23/94

**Time:** 0915

**Photo Taken By:** J. Albano

**Photo Number:** 06

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southwest

**Description:** Soil sample  
location SS02.





**Date:** 3/23/94

**Time:** 0918

**Photo Taken By:** J. Albano

**Photo Number:** 07

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** South

**Description:** Expanded view  
of soil sample location SS02.



**Date:** 3/23/94

**Time:** 0947

**Photo Taken By:** J. Albano

**Photo Number:** 08

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** View of soil sample  
location SS03.





**Date:** 3/23/94

**Time:** 1000

**Photo Taken By:** J. Albano

**Photo Number:** 09

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** View of soil sample  
location SS04. Placard incorrectly  
reads "SS03." Correct sample  
location is SS04.



**Date:** 3/23/94

**Time:** 1005

**Photo Taken By:** J. Albano

**Photo Number:** 10

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southwest

**Description:** Expanded view of  
soil sample locations SS03 and SS04.





**Date:** 3/23/94

**Time:** 1028

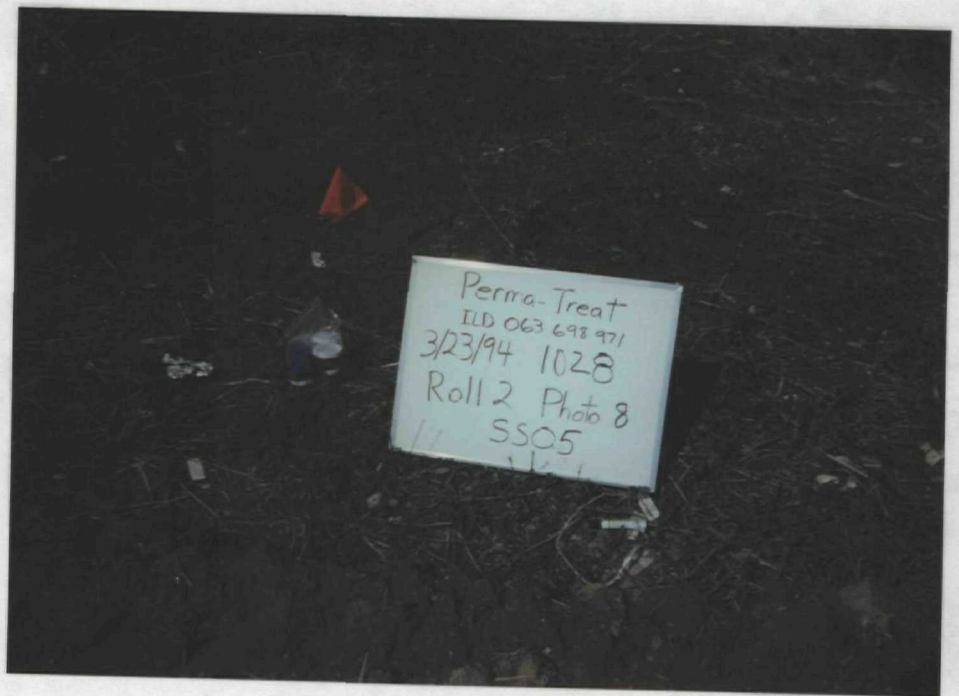
**Photo Taken By:** J. Albano

**Photo Number:** 11

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** West

**Description:** Soil sample  
location SS05.



**Date:** 3/23/94

**Time:** 1030

**Photo Taken By:** J. Albano

**Photo Number:** 12

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** West

**Description:** Expanded view of  
soil sample location SS05.





**Date:** 3/23/94

**Time:** 1040

**Photo Taken By:** J. Albano

**Photo Number:** 13

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Soil sample  
location SS06.



**Date:** 3/23/94

**Time:** 1042

**Photo Taken By:** J. Albano

**Photo Number:** 14

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Expanded view of  
soil sample location SS06.





**Date:** 3/23/94

**Time:** 1050

**Photo Taken By:** J. Albano

**Photo Number:** 15

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Soil sample  
location SS07.



**Date:** 3/23/94

**Time:** 1052

**Photo Taken By:** J. Albano

**Photo Number:** 16

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** Expanded view of  
soil sample location SS07.





**Date:** 3/23/94

**Time:** 1110

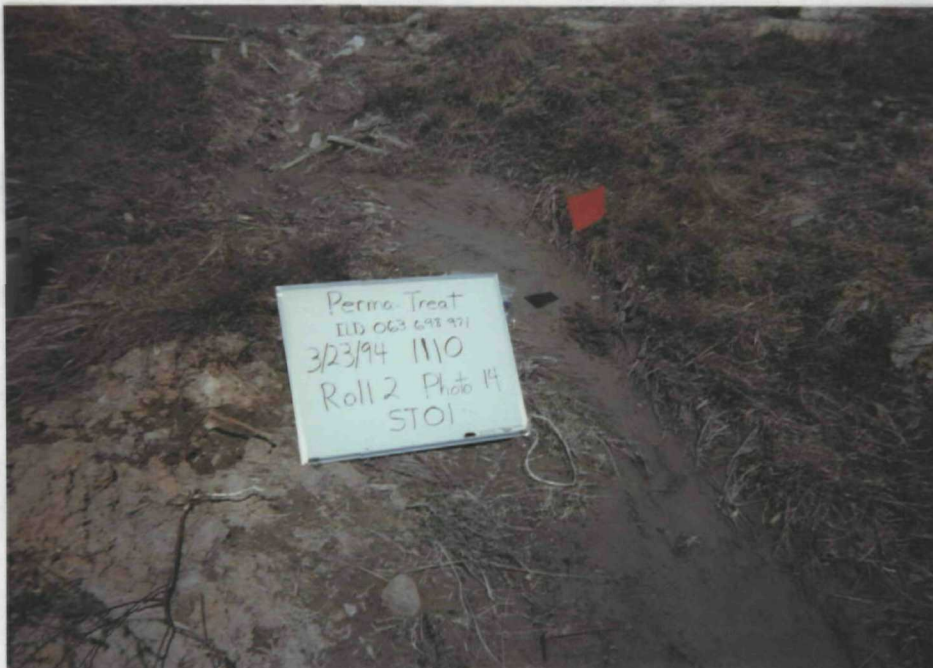
**Photo Taken By:** J. Albano

**Photo Number:** 17

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Sediment sample  
location ST01.



**Date:** 3/23/94

**Time:** 1112

**Photo Taken By:** J. Albano

**Photo Number:** 18

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** Expanded view of  
sediment sample location ST01.





**Date:** 3/23/94

**Time:** 1125

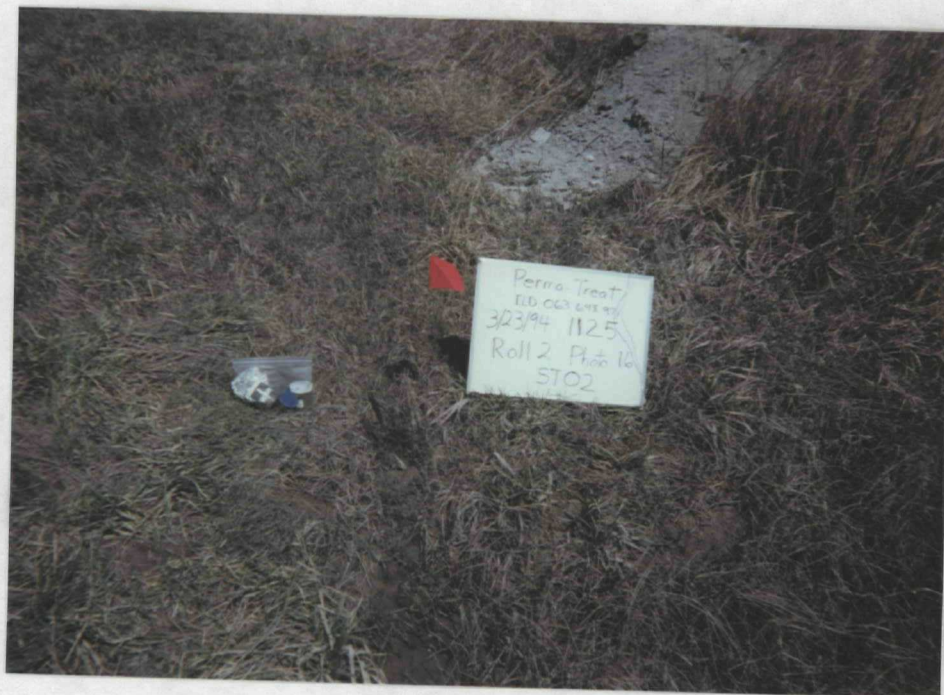
**Photo Taken By:** J. Albano

**Photo Number:** 19

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Sediment sample  
location ST02.



**Date:** 3/23/94

**Time:** 1127

**Photo Taken By:** J. Albano

**Photo Number:** 20

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Expanded view of  
sediment sample location ST02.





**Date:** 3/23/94

**Time:** 1150

**Photo Taken By:** J. Albano

**Photo Number:** 21

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** Sediment sample  
location ST03.



**Date:** 3/23/94

**Time:** 1152

**Photo Taken By:** J. Albano

**Photo Number:** 22

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Northwest

**Description:** Expanded view of  
sediment sample location ST03.





**Date:** 3/23/94

**Time:** 1405

**Photo Taken By:** J. Chitwood

**Photo Number:** 23

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Sediment sample  
location ST07.



**Date:** 3/23/94

**Time:** 1407

**Photo Taken By:** J. Albano

**Photo Number:** 24

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southeast

**Description:** Expanded view of  
sediment sample location ST07.





**Date:** 3/23/94

**Time:** 1440

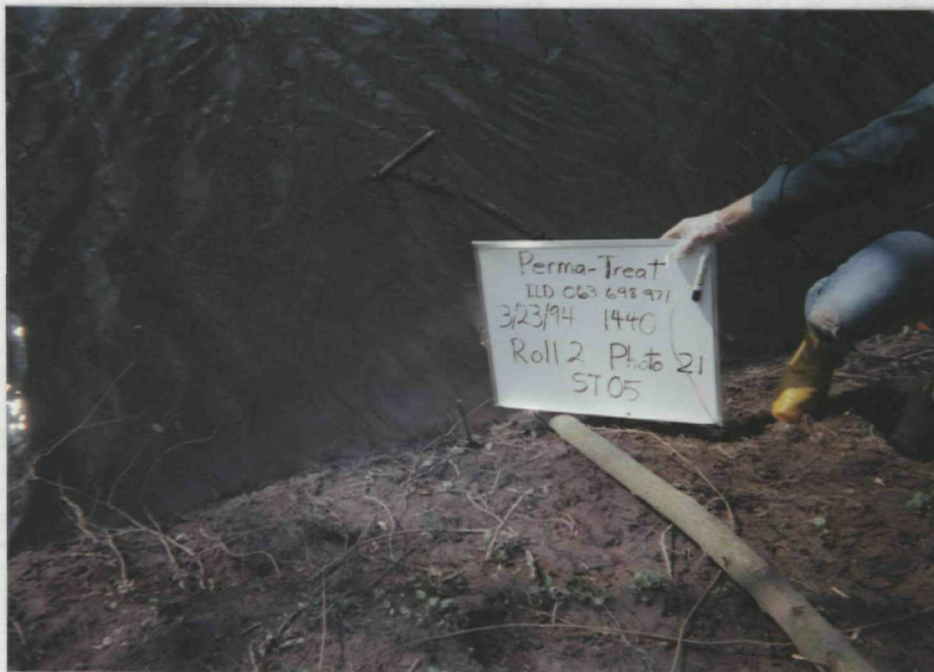
**Photo Taken By:** J. Albano

**Photo Number:** 25

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** West

**Description:** Sediment sample  
location ST05.



**Date:** 3/23/94

**Time:** 1520

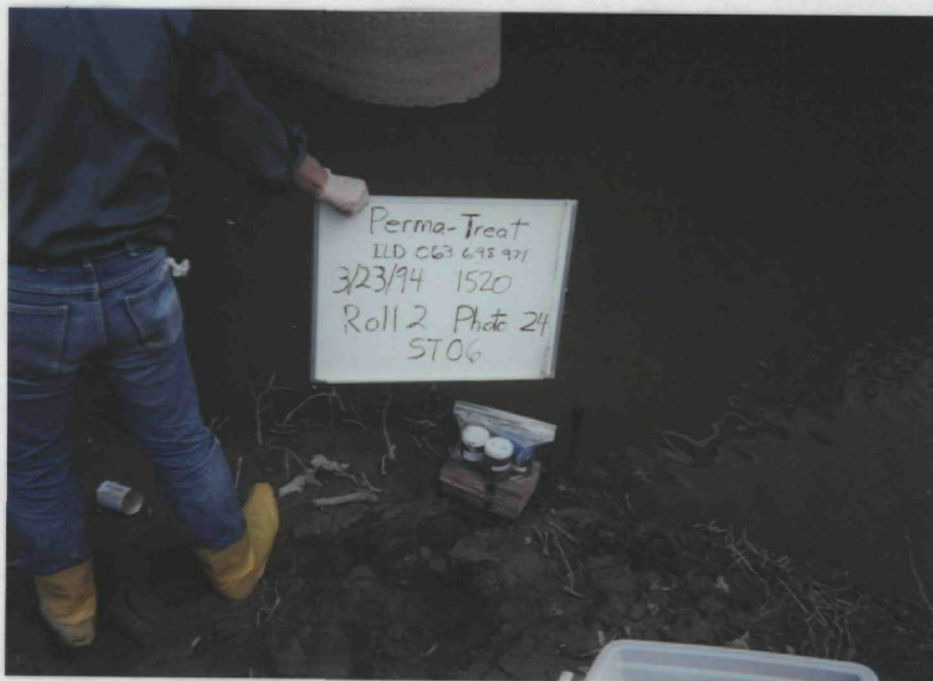
**Photo Taken By:** J. Albano

**Photo Number:** 26

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southeast

**Description:** Sediment sample  
location ST06.





**Date:** 3/23/94

**Time:** 1522

**Photo Taken By:** J. Albano

**Photo Number:** 27

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southeast

**Description:** Expanded view of  
sediment sample location ST06.



**Date:** 3/23/94

**Time:** 1545

**Photo Taken By:** J. Albano

**Photo Number:** 28

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Background soil  
sample location SS08. Placard  
incorrectly reads ST06. Correct  
sample location number is SS08.





**Date:** 3/23/94

**Time:** 1548

**Photo Taken By:** J. Albano

**Photo Number:** 29

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** East

**Description:** Expanded view of  
background soil sample location SS08.



**Date:** 3/23/94

**Time:** 1606

**Photo Taken By:** J. Albano

**Photo Number:** 30

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** North

**Description:** Sediment sample  
location ST04.





**Date:** 3/23/94

**Time:** 1608

**Photo Taken By:** J. Albano

**Photo Number:** 31

**Location/ILD #:** Perma-Treat  
of Illinois, Inc. ILD 063 698 971

**Direction of Photo:** Southeast

**Description:** Expanded view of  
sediment sample location ST04.



Appendix F

Perma-Treat of Illinois, Inc.

Representative Well Logs

White Copy -  
Ill. Dept of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

INSTRUCTIONS TO WELL OWNERS

PAGE 1 of 6

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706 DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH  
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug \_\_\_\_\_ Bored \_\_\_\_\_ Hole Diam. \_\_\_\_\_ in. Depth 300 ft.  
Curb material \_\_\_\_\_ Buried Slab: Yes \_\_\_\_\_ No \_\_\_\_\_  
b. Driven \_\_\_\_\_ Drive Pipe Diam. \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
c. Drilled XX Finished in Drift \_\_\_\_\_ In Rock XX  
Tubular \_\_\_\_\_ Gravel Packed \_\_\_\_\_  
d. Grout:

(KIND)	FROM (Ft)	TO (Ft)
CEMENT	10	0

2. Distance to Nearest:

Building NONE Ft. Seepage Tile Field NONE  
Cess Pool NONE Sewer (non Cast iron) NONE  
Privy NONE Sewer (Cast iron) NONE  
Septic Tank NONE Barnyard NONE  
Leaching Pit NONE Manure Pile NONE

3. Is water from this well to be used for human consumption?

Yes \_\_\_\_\_ No XX

4. Date well completed 3/16/73

5. Permanent Pump Installed? Yes ✓ No EX

Manufacturer Wehtrol Type W.P. Subm.  
Capacity 7 gpm. Depth of setting 280 ft.

6. Well Top Sealed? Yes XX No \_\_\_\_\_

7. Pitless Adaptor Installed? Yes \_\_\_\_\_ No XX

8. Well Disinfected? Yes XX No \_\_\_\_\_

9. Water Sample Submitted? Yes \_\_\_\_\_ No XX

REMARKS:

IDPH 4.065  
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner SPILL PIPE LOTS Well No. 1  
Address MANTON, ILLINOIS  
Driller FRANK LITTE, JR. License No. 22-588  
11. Permit No. 19607 Date 6/25/72  
12. Water from \_\_\_\_\_ Formation \_\_\_\_\_  
at depth \_\_\_\_\_ to \_\_\_\_\_ ft. Sec. 22  
14. Screen: Diam \_\_\_\_\_ in. Twp 08  
Length \_\_\_\_\_ ft. Slot \_\_\_\_\_ Rge 22  
Elev \_\_\_\_\_

15. Casing and Line Pipe

Diam. (in)	Kind and Weight	From (Ft)	To (Ft)
6 5/8	12# STEEL	41	12
5 1/2	GALVANIZED	40	300

SHOW  
LOCATION IN  
SECTION PLAT

S E S E S E

16. Size Hole below casing: \_\_\_\_\_ in.

17. Static level 57 ft. below casing top, which is \_\_\_\_\_ ft.  
above ground level. Pumping level \_\_\_\_\_ ft. when pumping at \_\_\_\_\_  
gpm for \_\_\_\_\_ hours.

18 FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
CLAY	6	6
LIGHT BROWN SANDSTONE	15'6"	22'6"
BLACK SHALE	3'6"	26
COAL	1	27
LIGHT GRAY SHALE	1	31
SANDY SHALE	1	35
SILTY LIGHT GRAY SANDSTONE	6	41
SHALY SANDY LIMESTONE	3	44
SHALY SANDSTONE	2	46

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Little, Jr. DATE 10/1/72

G. L. Dole Co.

Page 1 of 6



White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

PAGE 2 of 6 PAGES

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 300 in. Depth 300 ft.  
Curb material ☐ Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
- c. Drilled XX Finished in Drift ☐ In Rock XX  
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
CEMENT	10	0

### 2. Distance to Nearest:

Building NONE Ft. Seepage Tile Field NONE  
Cess Pool NONE Sewer (non Cast iron) NONE  
Privy NONE Sewer (Cast iron) NONE  
Septic Tank NONE Barnyard NONE  
Leaching Pit NONE Manure Pile NONE

### 3. Is water from this well to be used for human consumption?

Yes ☐ No XX

### 4. Date well completed

5. Permanent Pump Installed? Yes ☒ No XX  
Manufacturer ☐ Type ☐  
Capacity ☐ gpm. Depth of setting ☐ ft.

6. Well Top Sealed? Yes XX No ☐

7. Pitless Adaptor Installed? Yes ☐ No XX

8. Well Disinfected? Yes XX No ☐

9. Water Sample Submitted? Yes ☐ No XX

### REMARKS:

IDPH 4.065  
10/68

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner SMITH, PETER Well No. 1  
Address MARION, ILLINOIS  
Driller FRANK DEPP, JR. License No. 92-568  
11. Permit No. 19687 Date 8/25/72  
12. Water from ☐ Formation WILLIAMSON  
at depth ☐ to ☐ ft. Sec. 26  
14. Screen: Diam. ☐ in. Twp. 2S  
Length: ☐ ft. Slot ☐ Rge. 2E  
Elev. ☐


### 15. Casing and Liner Pipe

Diam (in)	Kind and Weight	From (Ft)	To (Ft)

SHOW  
LOCATION IN  
SECTION PLAT

16. Size Hole below casing: ☐ in  
17. Static level ☐ ft. below casing top which is 1 ft.  
above ground level. Pumping level ☐ ft. when pumping at 3  
gpm for 1 hours

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
GRAY SHALE	6	52
SANDY GRAY SHALE	9	61
DARK GRAY SHALE	37	98
COAL	3	101
GRAY SHALE, LIME SEAMS	25	126
SHALE	4	130
LIMESTONE	3	133
SHALE & LIMESTONE	5	138
SANDSTONE	1	139

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Depp, Jr. DATE 10/6/72

page 2 of 6

White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

PAGE 3 of 6 PAGES

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH  
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug \_\_\_\_ Bored \_\_\_\_ Hole Diam. \_\_\_\_ in. Depth 300 ft.  
Curb material \_\_\_\_ Buried Slab: Yes \_\_\_\_ No \_\_\_\_  
b. Driven \_\_\_\_ Drive Pipe Diam. \_\_\_\_ in. Depth \_\_\_\_ ft.  
c. Drilled XX Finished in Drift \_\_\_\_ In Rock XX  
Tubular \_\_\_\_ Gravel Packed \_\_\_\_  
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
CEMENT	10	0

2. Distance to Nearest:

Building \_\_\_\_ Ft. Seepage Tile Field \_\_\_\_  
Cess Pool \_\_\_\_ Sewer (non Cast Iron) \_\_\_\_  
Privy \_\_\_\_ Sewer (Cast Iron) \_\_\_\_  
Septic Tank \_\_\_\_ Barnyard \_\_\_\_  
Leaching Pit \_\_\_\_ Manure Pile \_\_\_\_

3. Is water from this well to be used for human consumption?

Yes \_\_\_\_ No \_\_\_\_

4. Date well completed \_\_\_\_

5. Permanent Pump Installed? Yes \_\_\_\_ No \_\_\_\_

Manufacturer \_\_\_\_ Type \_\_\_\_  
Capacity \_\_\_\_ gpm. Depth of setting \_\_\_\_ ft.

6. Well Top Sealed? Yes \_\_\_\_ No \_\_\_\_

7. Pitless Adaptor Installed? Yes \_\_\_\_ No \_\_\_\_

8. Well Disinfected? Yes \_\_\_\_ No \_\_\_\_

9. Water Sample Submitted? Yes \_\_\_\_ No \_\_\_\_

REMARKS:

IDPH 4.065  
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner SHELL PIPE LINE Well No. 1  
Address MARTIN, ILLINOIS  
Driller FRANK HEPP, JR. License No. 92-500  
11. Permit No. 19687 Date 8/25/72  
12. Water from \_\_\_\_ Formation \_\_\_\_  
at depth \_\_\_\_ to \_\_\_\_ ft. Sec. 26  
14. Screen: Diam. \_\_\_\_ in. Twp 93  
Length: \_\_\_\_ ft. Slot \_\_\_\_ Rge. 22  
Elev. \_\_\_\_

15. Casing and Liner Pipe

Diam. (in)	Kind and Weight	From (Ft)	To (Ft)

SHOW  
LOCATION IN  
SECTION PLAT

16. Size Hole below casing: \_\_\_\_ in.

17. Static level \_\_\_\_ ft. below casing top which is \_\_\_\_ ft.  
above ground level. Pumping level \_\_\_\_ ft. when pumping at \_\_\_\_  
gpm for \_\_\_\_ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
SHALE	4	113
SANDSTONE & SHALE	3'6"	116'6"
SHALE	1'6"	118'6"
SANDSTONE	1	119'6"
SHALE & SANDSTONE	6"	150
SANDSTONE	2	152
SHALEY SANDSTONE	3	155
SANDSTONE	20	175
VERY HARD SANDSTONE	15	190

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Hepp, Jr. DATE 10/6/72

page 3 of 6

White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

PAGE 4 of 6 PAGES

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug \_\_\_\_\_ Bored \_\_\_\_\_ Hole Diam. \_\_\_\_\_ in. Depth 300 ft.  
Curb material \_\_\_\_\_ Buried Slab: Yes \_\_\_\_\_ No \_\_\_\_\_  
b. Driven \_\_\_\_\_ Drive Pipe Diam. \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
c. Drilled XX Finished in Drift \_\_\_\_\_ In Rock XX \_\_\_\_\_  
Tubular \_\_\_\_\_ Gravel Packed \_\_\_\_\_  
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

### 2. Distance to Nearest:

Building \_\_\_\_\_ Ft. Seepage Tile Field \_\_\_\_\_  
Cess Pool \_\_\_\_\_ Sewer (non Cast Iron) \_\_\_\_\_  
Privy \_\_\_\_\_ Sewer (Cast Iron) \_\_\_\_\_  
Septic Tank \_\_\_\_\_ Barnyard \_\_\_\_\_  
Leaching Pit \_\_\_\_\_ Manure Pile \_\_\_\_\_

### 3. Is water from this well to be used for human consumption?

Yes \_\_\_\_\_ No \_\_\_\_\_

### 4. Date well completed \_\_\_\_\_

### 5. Permanent Pump Installed? Yes \_\_\_\_\_ No \_\_\_\_\_

Manufacturer \_\_\_\_\_ Type \_\_\_\_\_

Capacity \_\_\_\_\_ gpm. Depth of setting \_\_\_\_\_ ft.

### 6. Well Top Sealed? Yes \_\_\_\_\_ No \_\_\_\_\_

### 7. Pitless Adaptor Installed? Yes \_\_\_\_\_ No \_\_\_\_\_

### 8. Well Disinfected? Yes \_\_\_\_\_ No \_\_\_\_\_

### 9. Water Sample Submitted? Yes \_\_\_\_\_ No \_\_\_\_\_

### REMARKS:

IDPH 4.065  
10/68

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

### 10. Property owner SIGNAL PIPE LINE Well No. \_\_\_\_\_

Address MARTON, ILLINOIS

Driller FRANK HOPP, JR. License No. 92-588

### 11. Permit No. 19687 Date 8/25/72

### 12. Water from \_\_\_\_\_ 13. County WILLIAMSON

Formation \_\_\_\_\_  
at depth \_\_\_\_\_ to \_\_\_\_\_ ft. Sec. 26

### 14. Screen: Diam. \_\_\_\_\_ in. Twp. 9S

Length: \_\_\_\_\_ ft. Slot \_\_\_\_\_ Rge. 2E

Elev. \_\_\_\_\_

### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)

SHOW  
LOCATION IN  
SECTION PLAT

### 16. Size Hole below casing: \_\_\_\_\_ in

17. Static level \_\_\_\_\_ ft. below casing top which is \_\_\_\_\_ ft.  
above ground level. Pumping level \_\_\_\_\_ ft. when pumping at \_\_\_\_\_  
gpm for \_\_\_\_\_ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>SHALE</u>	<u>3</u>	<u>198</u>
<u>SHALE &amp; SANDSTONE</u>	<u>17</u>	<u>215</u>
<u>SANDSTONE</u>	<u>2</u>	<u>217</u>
<u>SHALE &amp; SANDSTONE</u>	<u>3</u>	<u>220</u>
<u>SANDSTONE</u>	<u>3</u>	<u>223</u>
<u>SHALE &amp; SANDSTONE</u>	<u>2</u>	<u>225</u>
<u>SHALE</u>	<u>1</u>	<u>226</u>
<u>SANDSTONE &amp; SHALE</u>	<u>2</u>	<u>228</u>
<u>SANDSTONE</u>	<u>7</u>	<u>235</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Hopp, Jr. DATE 10/6/72

re 4 of 6

White Copy -  
Ill. Dept. of Pub. Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO WELLERS

PAGE 5 of 5 PAGES

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth 300 ft.  
Curb material  Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.
- c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

### 2. Distance to Nearest:

Building  Ft. Seepage Tile Field

Cess Pool  Sewer (non Cast iron)

Privy  Sewer (Cast iron)

Septic Tank  Barnyard

Leaching Pit  Manure Pile

### 3. Is water from this well to be used for human consumption?

Yes ☐ No ☐

### 4. Date well completed

### 5. Permanent Pump Installed? Yes ☐ No ☐

Manufacturer  Type

Capacity  gpm. Depth of setting  ft.

### 6. Well Top Sealed? Yes ☐ No ☐

### 7. Pitless Adaptor Installed? Yes ☐ No ☐

### 8. Well Disinfected? Yes ☐ No ☐

### 9. Water Sample Submitted? Yes ☐ No ☐

### REMARKS:

IDPH 4.065  
10/68

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

### 10. Property owner SHELL PIPE LINE Well No.

Address MERTON, ILLINOIS

Driller FRANK HEPP, JR. License No. 02-588

### 11. Permit No. L7537 Date 8/25/72

### 12. Water from 13. County WILLIAMSON

Formation   
at depth  to  ft. Sec. 26

### 14. Screen: Diam. in. Twp. 9S

Length:  ft. Slot  Rge. 2E

Elev.


### 15. Casing and Liner Pipe

Diam (in)	Kind and Weight	From (Ft)	To (Ft)

SHOW  
LOCATION IN  
SECTION PLAT

### 16. Size Hole below casing: in.

17. Static level  ft. below casing top which is  ft.  
above ground level. Pumping level  ft. when pumping at   
gpm for  hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
SHALE & SANDSTONE	2	237
SHALE	8	245
SHALE & SANDSTONE	10	255
SANDSTONE	1	259
SHALE	3	262
SANDY SHALE	9	271
COAL	1	272
SHALE	17'6"	289'6"
LIMESTONE	6"	290

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Hepp, Jr. DATE 10/5/72

page 5 of 6



White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706 DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug \_\_\_\_\_ Bored \_\_\_\_\_ Hole Diam. \_\_\_\_\_ in. Depth 300 ft.  
Curb material \_\_\_\_\_ Buried Slab: Yes \_\_\_\_\_ No \_\_\_\_\_
- b. Driven \_\_\_\_\_ Drive Pipe Diam. \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.
- c. Drilled XX Finished in Drift \_\_\_\_\_ In Rock XX  
Tubular \_\_\_\_\_ Gravel Packed \_\_\_\_\_
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

### 2. Distance to Nearest:

Building \_\_\_\_\_ Ft. Seepage Tile Field \_\_\_\_\_  
Cess Pool \_\_\_\_\_ Sewer (non Cast iron) \_\_\_\_\_  
Privy \_\_\_\_\_ Sewer (Cast iron) \_\_\_\_\_  
Septic Tank \_\_\_\_\_ Barnyard \_\_\_\_\_  
Leaching Pit \_\_\_\_\_ Manure Pile \_\_\_\_\_

### 3. Is water from this well to be used for human consumption?

Yes \_\_\_\_\_ No \_\_\_\_\_

### 4. Date well completed \_\_\_\_\_

### 5. Permanent Pump Installed? Yes \_\_\_\_\_ No \_\_\_\_\_

Manufacturer \_\_\_\_\_ Type \_\_\_\_\_

Capacity \_\_\_\_\_ gpm. Depth of setting \_\_\_\_\_ ft.

### 6. Well Top Sealed? Yes \_\_\_\_\_ No \_\_\_\_\_

### 7. Pitless Adaptor Installed? Yes \_\_\_\_\_ No \_\_\_\_\_

### 8. Well Disinfected? Yes \_\_\_\_\_ No \_\_\_\_\_

### 9. Water Sample Submitted? Yes \_\_\_\_\_ No \_\_\_\_\_

### REMARKS:

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner SMITH PIPE LINE Well No. \_\_\_\_\_

Address MADISON, ILLINOIS

Driller FRANK HEPP, JR. License No. 92-5346

11. Permit No. 19687 Date 11/25/72

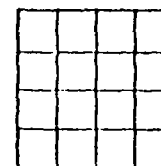
12. Water from \_\_\_\_\_ Formation \_\_\_\_\_ 13. County ILLINOIS

at depth \_\_\_\_\_ to \_\_\_\_\_ ft. Sec. 26

14. Screen: Diam. \_\_\_\_\_ in. Twp 28

Length: \_\_\_\_\_ ft. Slot \_\_\_\_\_ Rge. 23

Elev. \_\_\_\_\_



SHOW  
LOCATION IN  
SECTION PLAT

### 15. Casing and Liner Pipe

Diam (in)	Kind and Weight	From (Ft)	To (Ft)

16. Size Hole below casing: \_\_\_\_\_ in.

17. Static level \_\_\_\_\_ ft. below casing top which is \_\_\_\_\_ ft.  
above ground level. Pumping level \_\_\_\_\_ ft. when pumping at \_\_\_\_\_  
gpm for \_\_\_\_\_ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>SHALE &amp; LIME</u>	<u>3</u>	<u>213</u>
<u>SHALE &amp; SANDSTONE</u>	<u>2</u>	<u>295</u>
<u>SANDSTONE</u>	<u>5</u>	<u>300</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frank Hepp, Jr. DATE 10/6/72

White Copy - Ill. Dept. of Public Health  
Yellow Copy - Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO WELLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout: ☐

(KIND)	FROM (Ft.)	TO (Ft.)
NEPT	0	30

### 2. Distance to Nearest:

Building 25' Ft. Seepage Tile Field ☐  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) ☐  
Septic Tank 25' Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

### 3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

### 4. Date well completed Sept 27/69

### 5. Permanent Pump Installed? Yes ☐ No ☐

Manufacturer  Type   
Capacity  gpm. Depth of setting  ft.

### 6. Well Top Sealed? Yes ☒ No ☐

### 7. Pitless Adaptor Installed? Yes ☐ No ☐

### 8. Well Disinfected? Yes ☒ No ☐

### 9. Water Sample Submitted? Yes ☐ No ☒

REMARKS: Some items above I can not answer because I do not sell or set pumps.

IDPH 4.065  
10/68

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Ray Hardman Well No.   
Address RFD 1 Marion, Ill.  
Driller James A. Heer License No. 92-487  
11. Permit No. 8155 Date Aug 20, 69  
12. Water from Sand Stone Formation  
at depth 100 to 110 ft. Sec. 31.8h  
14. Screen: Diam.  in. Twp 9S  
Length:  ft. Slot  Rge. 3E  
Elev.


### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
2" x 0	Black	0	91
	23 lb.		

SHOW LOCATION IN SECTION PLAT  
75'S 75'W  
NE/C NW NW NW

16. Size Hole below casing: 6 1/2 in.  
17. Static level 20 ft. below casing top which is 8 ft. above ground level. Pumping level 80 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
clay, yellow sandy	30'	30'
sand, gray	60'	90'
sandstone, gray	25'	115'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED James A. Heer DATE 10/24/69

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Burled Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout: ☐

(KIND)	FROM (Ft.)	TO (Ft.)
Cement	Ground level	395'

## 2. Distance to Nearest:

- Building  Ft. Seepage Tile Field   
Cess Pool  Sewer (non Cast iron)   
Privy  Sewer (Cast iron)   
Septic Tank  Barnyard   
Leaching Pit  Manure Pile

3. Well furnishes water for human consumption? Yes ☐ No ☐  
4. Date well completed   
5. Permanent Pump Installed? Yes ☐ Date  No ☐  
Manufacturer  Type  Location   
Capacity  gpm. Depth of Setting  Ft.  
6. Well Top Sealed? Yes ☐ No ☐ Type   
7. Pitless Adapter Installed? Yes ☐ No ☐  
Manufacturer  Model Number   
How attached to casing?   
8. Well Disinfected? Yes ☐ No ☐  
9. Pump and Equipment Disinfected? Yes ☐ No ☐  
10. Pressure Tank Size  gal. Type   
Location   
11. Water Sample Submitted? Yes ☒ No ☐

REMARKS:

# GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Peter's Ciba Betty C. Well No.   
Address Marion, IL  
Driller Ray Beardsley License No. 102-187  
11. Permit No. 86103 Date 5-29-79  
12. Water from Sandstone 13. County Williamson  
Formation  
at depth 440 to 600 ft. Sec. 238  
14. Screen: Diam.  in. Twp. 9S  
Length:  ft. Slot  Rge. 2E  
Elev.


## 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	280 Wall Steel	+1	395'

SHOW  
LOCATION IN  
SECTION PLAT  
Section 238  
Twp. 9S  
Rge. 2E  
# 2

16. Size Hole below casing: 6 in.  
17. Static level  ft. below casing top which is  ft.  
above ground level. Pumping level  ft. when pumping at   
gpm for  hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	15'	15'
Gravel	1	16
Yellow sandstone	16	32
Gray Sandstone	1	33
Black Hard Shale	2	35'
Soft Gray shale	3	38
Gray limestone	4	42
Gray sandstone	3	45'
Gray shale	3	48

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

(OVER)

SIGNED Wanda Beardsley DATE 7-5-79

White Copy -  
Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☒ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Hole casing	0	70

### 2. Distance to Nearest:

Building 8 Ft. Seepage Tile Field 180  
Cess Pool No Sewer (non Cast iron) 157  
Privy No Sewer (Cast iron) No  
Septic Tank 150 Barnyard No  
Leaching Pit No Manure Pile No

### 3. Well furnishes water for human consumption? Yes Yes No ☐

### 4. Date well completed 9-24-1980

### 5. Permanent Pump Installed? Yes ☐ Date No No

Manufacturer  Type  Location   
Capacity  gpm. Depth of Setting  Ft.

### 6. Well Top Sealed? Yes ☐ No No Type

### 7. Pitless Adapter Installed? Yes ☐ No No

Manufacturer  Model Number   
How attached to casing?

### 8. Well Disinfected? Yes Yes No ☐

### 9. Pump and Equipment Disinfected? Yes ☐ No ☐

### 10. Pressure Tank Size gal. Type Location

### 11. Water Sample Submitted? Yes ☐ No No

REMARKS:

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

### 10. Property owner Alfred Maynard Well No. 1

Address RR #3 Box 35 Marion IL

Driller George E. Keen License No. 102-144

### 11. Permit No. 96197 Date 9-17-1980

### 12. Water from Penn. Sand 13. County Williamson

at depth 135 to 199 ft. Sec. 25

### 14. Screen: Diam. 4 in. Twp. 9S

Length:  ft. Slot  Rge. 2E

Elev.

### 15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6	PVC, Sec 40	1	70

SHOW  
LOCATION IN  
SECTION PLAT  
SW SW NW

### 16. Size Hole below casing: 5 in.

### 17. Static level 29 ft. below casing top which is 1 ft.

above ground level. Pumping level 190 ft. when pumping at 5  
gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
CLAY & Sand	45	45
Shale & Blue mud	10	55
Shale Grey	43	98
Lime stone Brown	6	104
Shale & SLATE dark	31	135
Shale & Sand dark	30	165
Sand white	34	199
Sand & Shale dark	16	215

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED George E. Keen DATE 9-25-1980

White Copy - Ill. Dept. of Public Health  
Yellow Copy - Well Contractor  
Blue Copy - Well Owner

# INSTRUCTIONS TO FILERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION BE SURE TO PROVIDE PROPER WELL LOCATION.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

### 1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam.  in. Depth  ft.  
Curb material  Buried Slab: Yes ☐ No ☐  
b. Driven ☐ Drive Pipe Diam.  in. Depth  ft.  
c. Drilled ☒ Finished in Drift ☐ In Rock ☒  
Tubular ☐ Gravel Packed ☐  
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
NEAT	0	39

### 2. Distance to Nearest:

Building 20 Ft. Seepage Tile Field ☐  
Cess Pool ☐ Sewer (non Cast iron) ☐  
Privy ☐ Sewer (Cast iron) ☐  
Septic Tank 25' Barnyard ☐  
Leaching Pit ☐ Manure Pile ☐

### 3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

4. Date well completed 6/4/69

5. Permanent Pump Installed? Yes ☐ No ☐

Manufacturer  Type

Capacity  gpm. Depth of setting  ft.

6. Well Top Sealed? Yes ☒ No ☐

7. Pitless Adaptor Installed? Yes ☐ No ☐

8. Well Disinfected? Yes ☒ No ☐

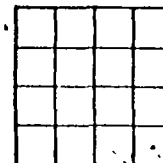
9. Water Sample Submitted? Yes ☐ No ☒

REMARKS: Some items above I can not answer because I do not set or sell pumps.

IDPH 4.065  
10/68

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner John Kutzner Well No.   
Address 555 S. Madison, S.E.  
Driller James A. Boer License No. 92-1187  
11. Permit No. 7426 Date 5/14/69  
12. Water from Sandy Shale 13. County Wilkes-Barre  
at depth 55 to 60 ft. Sec. 17  
14. Screen: Diam.  in. Twp. 9S  
Length:  ft. Slot  Rge. 2E  
Elev.



### 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6.5 in.	Black	0	39
	10 lb.		
	New Sealing		

SHOW  
LOCATION IN  
SECTION PLAT

80'N, 300'W of  
SE/4 SE SW SE

16. Size Hole below casing: 6" in.

17. Static level 5 ft. below casing top which is 8" ft. above ground level. Pumping level 60 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Gravelly S. Clay	34	39
Sandy Shale	36	75

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED James A. Boer DATE 6/4/69

Write Copy -  
Ill. Dept. of Public Health  
How Copy - Well Contractor  
No Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE  
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST  
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL WATER  
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

# ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

## 1. Type of Well

- a. Piped \_\_\_\_\_ Pared \_\_\_\_\_ Hole Diam. \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
Casing Material \_\_\_\_\_ Buried Slab: Yes \_\_\_\_\_ No \_\_\_\_\_  
b. Driven \_\_\_\_\_ Drive Pipe Diam. \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
c. Drilled X Finished in Drift \_\_\_\_\_ In Rock X  
Tubular \_\_\_\_\_ Gravel Packed \_\_\_\_\_  
d. Cased \_\_\_\_\_

FROM (FEET)	TO (FEET)
Neat	50

## 2. Distance to Nearest:

- Building \_\_\_\_\_ Ft. Seepage Tile Field None  
Cess Pool None Sewer (non Cast iron) \_\_\_\_\_  
Privy \_\_\_\_\_ Sewer (Cast iron) \_\_\_\_\_  
Septic Tank \_\_\_\_\_ Burial \_\_\_\_\_  
Leaching Pit \_\_\_\_\_ Manure Pile \_\_\_\_\_

## 3. Well handles water for human consumption? Yes \_\_\_\_\_ No X

## 4. Date well completed June 22/74

## 5. Permanent Pump Installed? Yes \_\_\_\_\_ Date \_\_\_\_\_ No X

Manufacturer \_\_\_\_\_ Type \_\_\_\_\_ Location \_\_\_\_\_  
Capacity \_\_\_\_\_ gpm. Depth of Setting \_\_\_\_\_ ft.

## 6. Well Top Sealed? Yes X No \_\_\_\_\_

## 7. Well Bottom Sealed? Yes \_\_\_\_\_ No X

Manufacturer \_\_\_\_\_ Model \_\_\_\_\_  
How attached to casing? \_\_\_\_\_

## 8. Well Disinfected? Yes X No \_\_\_\_\_

## 9. Pump and Equipment Disinfected? Yes \_\_\_\_\_ No \_\_\_\_\_

## 10. Pressure Tank Size \_\_\_\_\_ gals. Type \_\_\_\_\_

Location \_\_\_\_\_

## 11. Water Sample Submitted? Yes \_\_\_\_\_ No X

REMARKS \_\_\_\_\_

## GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner \_\_\_\_\_ Address \_\_\_\_\_  
Driller James A. Green  
11. From 30566  
12. Water from Sandstone at depth 100 to 155 ft. Sec. 14 Twp. 9S R. 2E  
13. Screen: Diam. \_\_\_\_\_ in. Length \_\_\_\_\_ ft. Elev. \_\_\_\_\_

## 14. Casing and Liner P

From (in.)	Kind and Thickness	From (ft.)	To (ft.)
6	Plastic Sec 40	0	50

16. Size Hole hole casing \_\_\_\_\_ in.  
17. Static level 15 ft. below ground level. Pumping level 150 ft. below ground level. Flow rate \_\_\_\_\_ gpm for 4 hours.

FORMATIONS PASSED THROUGH	THICKNESS
Sandy Clay	45
Sandstone with shale layers	115

(CONTINUE ON SEPARATE SHEET IF TO CLASSIFY)

SIGNATURE \_\_\_\_\_